1.1. early efforts to transform the Stagnant Colonial economy of India.

India inherited a stagnant economy at the end of the colonial rule in 1947. This can be attributed to the passive role of the British Government towards India's economic development. The economy left over by the British was a crippled one where low per capita income, massive unemployment, inadequate infrastructure, dominance of primary products, meagre quantity of finished products and recurring food shortage were some of the dismal phenomena. Thus, there were glaring imbalances in the economy. In view of this a sense of urgency to generate a process of sustained economic growth was felt.

India had chosen the planned path of economic development. The First Five Year Plan had laid greater emphasis on agriculture for rapid economic development. Industrialisation has been defined as "filling up the empty cells of an input-output table." At the time of independence there were many empty cells in the input-output table. At that time India was devoid of ferrous metallurgical industry, non-ferrous metallurgical industry, power, industry, machine-building industry, drugs industry etc which were essential for sustained economic growth. Prof. P.C. Mahalanobis was associated with the work of the Planning Commission from the very beginning. At the

time of the formulation of Second Five Year Plan, he was asked to prepare a Draft Plan Frame which was submitted to the Planning Commission in March 1955. In the formulation of this Plan frame, he used his famous four-sector model which may be said to have provided the basis for planning in India. The model was an extension of his bi-sector model. The launching of the industry-oriented plan thus emerged.

In 1955, the Industrial Policy which attempted to define the empty cells of input-output was declared. It was then realised that a bigger plan like the Second Five Year Plan with a heavy industry orientation would require enlarged foreign assistance. During the plan period, the need for massive external resources became urgent. The instability in the economy of India was a great hindrance in the accelerated growth. It was thought that foreign aid could play a very useful role because it would provide substantial additional resources for investments in plans of economic development. India resorted to foreign assistance and aid was mobilised across three main channels: Bilateral, Multilateral and Private. In response to India's quest for external assistance Soviet Russia provided bilateral assistance. Indo-Soviet economic co-operation uninterruptedly continues even to this day. A much greater part of the aid provided so far has been channeled bilaterally. By mobilising resources from different channels inside and outside the country, the Government of India concentrated its efforts on transforming the stagnant economy into a dynamic one.
1.2. General terms of Borrowing from the USSR and other Western industrialised Countries:

The Government of India received external assistance from different countries. The terms and conditions of loans were not uniform, as may be seen from the figures given in this table:

<table>
<thead>
<tr>
<th>Country</th>
<th>Payment period</th>
<th>Grace period</th>
<th>Interest Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>40</td>
<td>40</td>
<td>10</td>
</tr>
<tr>
<td>USSR</td>
<td>12</td>
<td>12</td>
<td>1 year after deliveries.</td>
</tr>
<tr>
<td>West Germany</td>
<td>13.20</td>
<td>25</td>
<td>4-8</td>
</tr>
<tr>
<td>UK</td>
<td>26</td>
<td>25</td>
<td>7</td>
</tr>
</tbody>
</table>


An examination of this table 1.1. establishes the fact that the USA is a lender on the softest terms. Loans advanced by other countries shown in the table, except by the USSR, have been on terms which are not very soft. USSR continued to advance loans on the same terms and conditions as in 1961 and these terms were softer than all the loan of other countries excepting USA. To qualify as 'aid', the capital flow should meet two criteria: (a) it should be offered on concessional terms, i.e., the rate of interest, amortization and maturing
of a loan should be "softer" than commercial terms of a normal market transaction, and (b) the objective of the capital should stimulate the recipient country's development effort. Soviet loans were of self-liquidating nature. The repayments were to be done through exports. It provided India with means of repayments. Soviet Russia offered long term credits without any equity participation. The genuine "aid" element consists in the terms of credit at the rate of 2.5 per cent per annum, and was, subsidised and therefore more favourable than commercial terms. On the contrary, Western aid was demanding as high as 3.5% interest per annum as well as equity participation. If all these things are considered together, it becomes apparent that Soviet credits are softer than those of the Western industrialised Countries. Borrowings from the Soviet Union during the period of planned economic development have made possible the import of high priority goods to be used to create and build capacity for accelerating the rate of growth of the economy. It may be stated in a general form that Soviet aid helped the Indian economy to build a base for economic development in the post-independence era.


1.3. **Obstacles in aid flow and U.S.S.R.'s positive responsiveness in meeting the credit need of India**

When India was in dire need of massive assistance to pursue the chosen pattern of development emphasising the paramount importance of the public sector, the response from the Western aid givers was rather lukewarm. The USA refused to provide assistance to public sector development of heavy industry, oil exploration, oil refining etc., which were of vital strategic importance for India. USA backed out of India's request for the Bokaro Steel Project. Thus the early years of Second Five Year Plan marked the nadir of Indo-US relations.

The Government established the Public Sector Corporations in various spheres of activity to achieve in their totality the national objectives listed in the Industrial Policy Resolutions, the Five Year Plans and the economic programmes. It was felt that public enterprise as a pace-setter would initiate the process of development with the basic and key industries as the nucleus. Foreign collaboration was, therefore, sought only to the extent that it will promote and accelerate growth at fast pace. The US collaboration was sought in some of the public sector undertakings, including the proposed Bokaro Steel Plant, considering the sophistication of the American technology. But USA's negation of the Bokaro assistance came as a big blow. That made India find an alternative source to materialise this project and
India had a fruitful negotiation with the USSR on this Project.

Soviet emphasis on industrialisation through heavy industry and its assistance to public sector projects clearly gave a prestige-impact as rapid industrialisation in an under-developed country like India was considered as the surer means to attain economic independence. Western industrialised countries including the USA, had shown apathy to India's strategy of industrialisation through public sector enterprise. Instead they had been indirectly insisting on embracing the consumption-oriented strategy of development. It seemed that they did not appreciate India's fervent effort to come out of economic backwardness. The Soviet emphasis on public sector heavy industry dovetailed perfectly with India's own doctrine of a 'Socialistic pattern of Society'. Thus Soviet assistance gave a fillip to India's effort of planned economic development. Putting it in another way, it can be said that the change of attitude of the Western donors in later years is mainly due to Soviet Russia's consistency in fulfilling the commitment for India's development programme.

1.4. **Objective of the study**

In the early sixties, India's effort for self-sustained growth had been able to attract world-wide attention and had been watched keenly by the members of the third world. Within this country, it was subject to criticism and appreciation.
by the advocates of free economy and controlled economy respectively. America's back out from the Bokaro Project and the Soviet offer to back the Project added a new dimension to the economic situation. Soviet offer to build up the Bokaro Project had further enhanced the value of Soviet aid. This is a remarkable period of India's history of economic development in post-independence era. The present study seeks to evaluate the contribution of USSR's economic assistance to India. The object of this study is to make an assessment of cost and benefits of USSR's assistance to India as an outcome of basically debtor-creditor relationship.

The period of study is 1965 to 1978. The choice of 1965 as the cut-off year for the aforesaid study is due to the fact that an agreement for Bokaro Credit was signed in 1965 signifying a landmark of Indo-Soviet economic relation. However, the study is not rigidly confined within this period — relevant references of preceding and succeeding years of the period have been drawn for the sake of a balanced study in retrospect and prospect. By and large, the study is a schematic one based on hypotheses which have been tested in the forthcoming chapters.

No country renders economic assistance on philanthropic consideration. The rationale for aid is naturally heterogeneous. Whatever be the rationale, it is the overall cost

and impact of aid that matters most. An attempt has been made here to make a correct appraisal of the Soviet aid to India both at micro and macro levels. How far the Indo-Soviet co-operation has succeeded in bringing structural changes in India's economy has been examined in this study. While analysing Indo-Soviet trade relations, special emphasis has been given on the unique feature of 'rupee trade' with the USSR. Estimation of the technological co-operation has also been attempted. In analysing the contrast, attention has been given to the relative terms of assistance from USA, UK, and West Germany. The focal point of this study is the role of Soviet economic assistance in accelerating India's economic development.

1.5. Economic Development and Foreign Aid:

'Economic development means building up of the potentials in the economy conducive to 'economic growth'. The term 'economic development' and 'economic growth' have quite often been used interchangeably. Meier and Baldwin, while admitting the existence of subtle differences in the terms of economic development, economic growth and secular change, suggest that in essence their connotation is the same.\(^5\) The two terms may be used as synonymous in the long period. In the short period 'economic' growth may be indicated to mean

an increase in the level of national income and product while economic development may be viewed as the extent of expansion in various factors leading to economic growth like savings, investments, foreign exchange earnings and the like.\textsuperscript{6}

The most important and challenging economic problem of the underdeveloped country like India is to attain higher rates of economic growth. In India the general people think that the colonial system was largely responsible for their poverty and hence with the abolition of this system people expect their conditions to be improved. The rapid economic growth of Russia, in a period of less than half a century and under a different socio-economic set up, has raised high hopes about rapid economic development in India.

An underdeveloped country like India generally suffers from chronic deficiency of capital which is largely responsible for low per capita output; shortage of capital is both a cause and effect of low level of productivity in India. The availability of capital is insufficient in relation to the resource potential at the prevailing standards of technology and as a result the economy is compelled to operate at low levels of productivity. Not only the existing stock of capital is inadequate to meet the requirements of economic development, but the current rate of capital formation is also too low to sustain a process of rapid economic development. Substantial accumulation of domestic savings in India

\textsuperscript{6} Prasad, D.N.; \textit{External Resources in Economic Development of India}, p. 8.
is not possible due to extremely low level of income and wide-spread poverty of the masses. Taxation and public borrowings as a means of capital formation have got their own limitations. Large scale deficit financing will produce inflationary impact on the economy. Thus the only way out is to depend to a greater or lesser extent on foreign capital. Foreign capital can be an important supplement to meagre domestic savings. Table 1.2 shows the rate of saving and capital formation during the plan period. Even if it is possible to finance economic development entirely by means of domestic savings, import of foreign capital will be necessary because economic development of a basically primary-producing country like India needs import of some Capital goods from abroad. The inflow of foreign capital serves important functions: it provides the recipient country with the means of acquiring local resources for domestic investment; it supplies foreign exchange for importing necessary materials and equipment directly needed for developing projects; and it also allows the importation of other commodities which will be demanded indirectly as development proceeds and national income rises. Without foreign capital the pace of development will be much slower or the domestic resources will have to be diverted to development work by lowering the standard of living or else inflation will have to be endured.

Low real income reflects low productivity; the low productivity is largely due to the lack of capital which is the result of the small capacity to save. The limitations and deficiencies imposed by poverty limit capital formation. "Poverty is the product of variety of causes. The particular combination of causes varies from country to country, depending upon culture, environment, and historical evolution." For economic development removal of poverty is a basic task which is one of the two major objectives of Fifth Five Year Plan. Removal of poverty requires resources. Apart from the traditional factors of production, technical knowledge, proper planning and efficient implementing machinery are also important factors that help gearing up of economic activities. The understanding of resources, the desire to use them, the application of capital and technical know-how are the means by which resources become active elements in economics. Therefore possession of resources should be regarded as permissive rather than deterministic.

Development brings economic changes and, inter alia, social changes, creation of new sets of values, new concepts of society, government etc. For an underdeveloped country the path of development is full of hazards and developing countries like India necessarily plan their economic and social metamorphosis in terms of priority.

## Table 1.2: Rate of Saving and Capital Formation

<table>
<thead>
<tr>
<th>Plan period</th>
<th>Net domestic Saving</th>
<th>Net inflow foreign capital</th>
<th>Net domestic capital formation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End of Second Plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960-61</td>
<td>9.3</td>
<td>3.4</td>
<td>12.7</td>
</tr>
<tr>
<td><strong>Third Plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1961-62</td>
<td>8.4</td>
<td>2.3</td>
<td>10.7</td>
</tr>
<tr>
<td>1962-63</td>
<td>9.6</td>
<td>2.7</td>
<td>12.3</td>
</tr>
<tr>
<td>1963-64</td>
<td>9.8</td>
<td>2.3</td>
<td>12.1</td>
</tr>
<tr>
<td>1964-65</td>
<td>9.2</td>
<td>2.8</td>
<td>12.0</td>
</tr>
<tr>
<td>1965-66</td>
<td>11.2</td>
<td>2.6</td>
<td>13.8</td>
</tr>
<tr>
<td><strong>Three Annual Plans</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1966-67</td>
<td>11.8</td>
<td>3.6</td>
<td>15.4</td>
</tr>
<tr>
<td>1967-68</td>
<td>9.6</td>
<td>2.7</td>
<td>12.3</td>
</tr>
<tr>
<td>1968-69</td>
<td>9.5</td>
<td>1.3</td>
<td>10.8</td>
</tr>
<tr>
<td><strong>Fourth Plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1969-70</td>
<td>11.8</td>
<td>0.7</td>
<td>12.5</td>
</tr>
<tr>
<td>1970-71</td>
<td>12.0</td>
<td>1.0</td>
<td>13.0</td>
</tr>
<tr>
<td>1971-72</td>
<td>12.3</td>
<td>1.2</td>
<td>13.5</td>
</tr>
<tr>
<td>1972-73</td>
<td>11.2</td>
<td>0.6</td>
<td>11.8</td>
</tr>
<tr>
<td>1973-74</td>
<td>13.8</td>
<td>0.7</td>
<td>14.5</td>
</tr>
<tr>
<td><strong>Fifth Plan</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1974-75</td>
<td>14.6</td>
<td>1.0</td>
<td>15.6</td>
</tr>
<tr>
<td>1975-76 +</td>
<td>16.0</td>
<td>- 0.2</td>
<td>15.8</td>
</tr>
<tr>
<td>1976-77 +</td>
<td>18.7</td>
<td>- 1.5</td>
<td>17.2</td>
</tr>
<tr>
<td>1977-78 +</td>
<td>17.8</td>
<td>- 1.2</td>
<td>16.6</td>
</tr>
</tbody>
</table>

* Net domestic product at current market prices.
Economic development is not an inevitable process but must be created and accelerated. Various co-ordinated measures are necessary to attain this objective. Capital formation is an important economic force which fulfils the twin objectives of breaking the vicious circle of poverty and making economic growth. Capital formation requires an act of investment as well as capacity to save. Foreign aid assists in the formation of capital. It plays a key role in the economic growth of an underdeveloped country like India.

Planned economic development requires capital goods and trained man power, improved technology etc. Generally capital goods are not available from internal resources. An underdeveloped country is also handicapped by paucity of foreign exchange. External assistance becomes essential to meet the requirement of foreign exchange and to overcome balance of payments constraints. As economic development for underdeveloped countries like India largely depends on imports of large scale of machinery, capital equipment, other producer goods etc. the problem of foreign exchange becomes a bottle-neck at least for a certain period.\(^{10}\) India accepted foreign aid under a similar situation. The essential significance of external aid is that it provides the developing economy with additional real resources to the recipient countries on concessional terms. In general practice, aid refers to the nominal value of the direct and indirect flow

\(^{10}\) First Five Year Plan, Planning Commission, Government of India, p. 65.
of financial and other sources at government level. In India foreign aid is required to fill the investment gap and trade gap. External financial assistance to underdeveloped countries is given in diverse forms. Sometimes it is linked with identified projects. Some of it is given to specific projects within the framework of developmental plan, for groups of projects rather than individual projects, for specific import requirements not linked to specific projects etc. As a matter of fact, external resources are designed to play a 'catalytic' role. A catalyst helps initiate the process to bring about the reaction much earlier. India invited foreign aid to bring about a structural change in the traditional economy.

1.6. Types of Foreign Investment:

There are three important forms of foreign Capital:

1. Private Foreign Capital.
2. Inter-governemental lending.
3. Institutional lending or Rentier Capital.

Private Foreign Capital:

These investments generally take the form of 'direct investment' through equity participation. The fundamental point of distinction in this case is that direct investment involves control by the investor of the enterprise in which investment is made. Investment of private foreign capital has been largely confined to only a few type of industries.

Private foreign capital does not fit into the pattern of planned development and it does not provide much hope for rapid industrialisation and economic development. 'It did little or nothing to promote and on occasions may even have impeded the economic development of the debtor countries.' Loans from private agencies are now only of historical importance especially after the depression of the 1930's in the international field.

**Inter-Governmental Lending:**

Governmental lending has become the most important of all the sources of foreign capital. Foreign loans for capital expenditure by public authorities have the advantage that they can be used for domestic economic development in accordance with a coherent overall programme. This sort of capital can be used according to the developmental plans of the recipient country. It is specially suitable for the development of economic and social overheads in developing countries.


Investment in public overhead capital involves such large amounts and so many risks that private investment cannot be expected to be attracted, and reliance must be placed on public loans for the basic requirements of overhead capital.

**Institutional Lending:**

This is another important source of foreign aid. Considerable amount of foreign capital comes through various international agencies. Like IBRD, IDA, IFC, ADB etc. The most important advantage of this type of foreign capital is that it may be multilaterally convertible. Such loans can be converted into any currency preferred by the debtor country. In that case the borrower country can have the advantage of purchasing its requirements from any country at competitive rates. Generally this sort of capital involves heavy burden in the form of interest and service charges. Foreign capital can be obtained from a multiplicity of sources, private and official. These different types of capital should not be treated as mutually exclusive. Each has its own uses and limitations and a combination of several sources and types of foreign capital is often desirable. That aid is most useful which helps the recipient country to dispense with aid in the foreseeable future.
1.7. The Savings-gap and the Trade-gap:

The Savings/Investments-gap is the difference between investment requirements and domestic savings. The difference between import requirement and export potential represents the 'trade-gap'. In Saving/Investments terms, the gap focuses attention on the aggregate resource requirements for growth and does not distinguish between domestic and foreign sources of supply. Focus on the trade-gap emphasises the fact that domestic output is not a perfect substitute for imports, and indeed, in view of the specialised nature and limited range of domestic industries in a developing country like India, it is recognised that imports of necessity play a rather critical role in the development process. In a developing country like India domestic industry and technology are not equipped to produce the required capital equipment, and hence the import component of investment is usually larger and unavoidable. Moreover, a wide-range of raw materials especially fuel, intermediate goods, and spare parts for industry are required to be imported, otherwise economic growth would be frustrated.

The economic development plans of a developing country needs a large investment outlay. The domestic resources fall short of the investment needs for a rapid rate of economic growth. So foreign aid becomes an urgent necessity, the magnitude of which can be calculated by the following equations:
\[ Fa = Di - Ds. \]

Where, 
- \( Fa \) = Amount of foreign aid
- \( Di \) = Domestic Investment of Development Programmes.
- \( Ds \) = Domestic Saving available.

Thus, in India, in the absence of adequate domestic savings (see Table 1.2) the inflow of foreign aid has accelerated the economic development. Foreign capital is no longer viewed as an "engine of exploitation" but as an "engine of progress".

The "two gaps" are identical because, \[ F = E - y = I - s = M - x, \]

Where \( F \) = foreign aid,
- \( E \) = aggregate domestic expenditure,
- \( Y \) = national output,
- \( I \) = domestic investment,
- \( S \) = domestic savings,
- \( M \) = imports
- \( X \) = exports,

Since the import surplus covering trade gap is the vehicle of transfer of external resources into the domestic process of development, there cannot be any difference between the two gaps; they are two aspects of the same thing.\(^{15}\)

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A distinction can be made between the foreign-exchange gap approach and the saving gap approach. Under the first, total estimate of imports over the plan period is made from which total expected export is deducted over the same period. The remainder is foreign-exchange gap. On the other hand total investments requirements and domestic savings over a plan period are estimated and the difference between the two is the savings-gap. In India foreign payments gap approach is followed in estimating foreign aid requirements.

1.8. **International Trade and Economic Development**

Classical and non-classical writers hold that international trade stimulates a country's development in several ways. Above and beyond the static gains that result from the more efficient allocation with given production functions, international trade also transforms existing production function and induces outward shifts in the production frontier.\(^\text{16}\) According to Prof. Haberler, such a shift in the production function takes place due to the following reasons:

a. the provision of material means of development in the form of capital goods, machinery and raw and semi-finished materials;

b. access to technological knowledge, skills managerial talents and entrepreneurship;

---

c. the receipt of capital through international investment and
d. the stimulating influence of competition.

International trade greatly extends the geographical base of a country's productive activities and thus makes it possible to set up industries which could not have functioned on the basis of nationally available resources. Commerce with foreign countries brings not only the new commodities and resources in proximity of home country but also brings new knowledge and a new environment and the subsequent application of that knowledge. This makes international trade a powerful 'engine of growth.'

1.9. The Myrdal Thesis:

Prof. Gunnar Myrdal maintains that economic development results in a circular causation process which results in further development in already developed countries while the weaker countries lag behind. It is because in an underdeveloped country the 'backwash' (Unfavourable) effects predominate while the 'Spread' (stimulating) effects are very feeble. This backwash effect is the genesis of international inequalities which in turn causes regional inequalities. According to Myrdal the classical economic theory is inadequate to serve the purpose of explaining reality of economic under-

development and development. It was due to unrealistic assumption of stable equilibrium. The concept of stable equilibrium cannot provide a suitable explanation regarding the process of social change.

Myrdal opines that the rich and developed countries are becoming richer and more developed while the backward countries are becoming more backward and there are no equilising forces operating to correct international equalities in the matter of economic development. International trade and capital movements are the media through which the economic progress in the advanced countries has the backsetting effects in the underdeveloped world. Myrdal maintains that, trade between developed and underdeveloped countries shows the tendency to remain away from equilibrium and brings discrepancies between productivity of advanced and underdeveloped countries. Myrdal further contends that trade operates with a fundamental bias in favour of the richer and progressive regions and in disfavour of the less developed countries. Unrestricted trade between a developed and underdeveloped country tends to strengthen the former and impoverish the later.

The rich countries have a large base of manufacturing industries with strong spread effects. The present pattern of primary production in underdeveloped countries reflects

backwash effects. The theory of comparative cost is in fact not related to the special problem of development which the backward countries face. The specialisation resulting from the doctrine of comparative costs has caused more harm than good to the primary producing countries. Under a system of free trade these countries tend to specialise in producing primary goods for export. But this sort of specialisation is not in their best interest. Rich countries by exporting their industrial products at cheap rates to underdeveloped countries, have priced out the small-scale industry and handicrafts of the backward countries. This has tended to convert the backward countries into the producers of primary products for exports. The demand for primary products being inelastic in the export market, they suffer from excessive price fluctuations. As a result, they are unable to take advantage of either a fall or a rise in the world prices of their exports. The importing countries take advantage of the cheapening of their products because of the inelastic market for their exports. Similar advantages follow when there is any technological improvement in their export production, when the world prices of their products rise they are again unable to benefit from it. Increased export earnings lead to inflationary pressures mal-allocation of investment expenditure and balance of payment difficulties when there are washed in speculation, Conspicuous consumption, foreign exchange holdings etc. Thus free international trade with developed
countries results in wrong specialisation in underdeveloped countries, hampers the growth of industrialisation and perpetuates international inequalities. The free play of market forces and unhampered trade have tended to cramp the export potential of such countries. As a result, a Great Gap has developed between imports and exports of underdeveloped countries which have made their economic development a costly and lengthy affair. Prof. Myrdal calls for a new trade policy for the underdeveloped countries different from that of developed countries free from certain 'disequalising forces' which have so long been operating in the world economy as a result of which the gains from trade have gone mainly to the developed countries.

2.10. Adequate growth rate and balance on international payments:

The conflict is very real between maintaining an adequate growth rate and preserving a reasonable balance on international payments. The solution perhaps lies in improving the balance of payments through trade. Export trade of developing countries is dominated by primary products. Primary products dominate the balance of payments of most developing countries.
There are three distinct factors which have been at work in the developed countries retarding the growth of the traditional exports of the developing countries. First of all, the pattern of demand has shifted to goods with a relatively low import content of primary commodities. Secondly, technological change has led to the development of (synthetic substitutes for raw materials synthetic fibre in place of jute jute fibre as for example). Last of all, developed countries have pursued protectionist policies (tariff barrier) which have retarded the growth of their imports of both primary commodities and manufactured goods. In view of these trading developments, and the emergence of a foreign exchange gap as the constraint on growth in developing countries, there is a shift from viewing trade from the traditional classical standpoint to viewing the effects of trade on the balance of payments.

1.11. Trade Strategy for developing countries:

Before going on to consider trade strategy for developing countries, it is relevant to discuss on static and dynamic gains from trade stressed by traditional theory. The static gains are those which accrue from international specialisation according to the doctrine of comparative advantage. The dynamic gains are those which result from the impact of trade on production possibilities at large. Economies of scale,
international investment and the transmission of technical knowledge are the examples of dynamic gains. Trade can also provide a vent for surplus commodities, which brings otherwise unemployed resources into employment, and also enables country to purchase goods from abroad. This is important because, if there are no domestic substitutes, the ability to import can relieve domestic constraints in production. Moreover, imports may simply be more productive than domestic resources.

The static gains from trade are based on the doctrine of comparative advantage. The static gains are the same gains as from trade creation that accrue with the establishment — customs union, when highcost suppliers are replaced by lower-cost suppliers. The doctrine of comparative costs provides the rationale for the formation of customs union, or trading areas, between developing countries. Comparative cost doctrine cannot ensure equality in the distribution of gains from trade creation.

The dynamic gains from trade are that exports market widen the total market for a country's producers. If production is subject to increasing returns, the total gains from trade will exceed the static gains from a more efficient allocation of resources. With increasing returns to scale, any country may benefit from trade irrespective of the terms of trade. If the developing country can trade, there is some prospect of industrialisation and of dispensing with tradi-
tional methods of production. The larger the market, the easier capital accumulation becomes if there are increasing returns to scale. Other important dynamic effects of trade consist of the stimulous to competition, the acquisition of new knowledge, new ideas and diffusion of technical knowledge, capital flow, increased specialisation the resultant effect being change in techniques of production and changes in attitudes and institutions. Another important potential gain from trade is the provision of an outlet for a country's surplus commodities which would otherwise go unsold and represent a waste of resources. This is otherwise known as 'vent for surplus' gain from trade.

The comparative advantage/free trade argument is a static one based on restrictive, and very often unrealistic assumptions. As a criterion for the international allocation of resources it suffers from certain major defects. The doctrine assumes, for example, the existence of full employment in each country (otherwise there will be no opportunity cost involved in expanding the production of commodities); it assumes that the prices of resources and goods reflect their opportunity cost (i.e., perfect competition exists), and the factor endowments are given and unalterable. Over and above, the doctrine ignores the effect of free trade on the terms of trade (movements in which affect real income), and the dynamic feedback effects that trade itself might have on comparative advantage. As a result, it can be maintained that
the principles of comparative advantage and free trade are not very useful concepts to employ in the context of developing countries like India which are in the throes of rapid structural change.

The doctrine of free trade ignores, the balance-of-payments effects of free trade and the effect of free trade on terms of trade. It ignores another phenomenon that some activities are subject to increasing returns while others are subject to diminishing returns. Primary products are subject to diminishing returns where the scope for technical advancement is rather limited in comparison to manufactured goods. Competitive advantage doctrine may result in excessive specialisation on a narrow range of products, putting the economy at the mercy of outside influence. The possibility of acute balance of payments strain resulting from specialisation may have ruinous effect on development. Export growth of some activities has relatively little secondary impact on other activities. Primary commodities fall into this category. The evidences are numerous to say that the export growth of primary commodities has not had the development impact that might be expected from the expansion of industrial exports. The contradictions in the concept of classical trade theory necessitated new trade strategy for the developing countries.
The Prebisch Doctrine:

In terms of world trade, the universe has come to be divided into two groups. One group of countries are scientifically very advanced, enjoy very high living standard, have much better share of the world exports and import manufactured goods. On the other hand, the second group of countries consists of those whose share in world population is very high but extremely small in world income and world export and depend on a few primary commodities for earning foreign exchange. Not only that, this system is being perpetuated because the rich community is very slow in transferring technology to the poor countries. The unequal economic power is further widened because of the terms of trade moving against the exporters of primary goods. It was Paul Prebisch who came out strongly against the terms of trade always loaded against the poor people. He said that there was a secular tendency for terms of trade to remain against the poor countries. Therefore, world trade rather than correcting the unequal distribution of income was further responsible for transferring real resources from poor countries to the rich countries.

Paul Prebisch assigns two reasons for the terms of trade having a secular tendency to move against the poor countries. Firstly, the rich countries do not part with the scientific knowledge. At the same time, they have monopolised control over the manufactured goods because of which

Thus Prebisch argues the case for protection on the grounds of improving the terms of trade, and as a substitute for exchange depreciation to preserve internal and external equilibrium.

1.12. (b) Bhagwati's Thesis: Phenomenon of Immiserising growth

The classical doctrine on the growth-promoting effects of international trade has been challenged by modern economists on two grounds:

(1) By denying the relevance of the conclusions of traditional trade theory and

(2) By contending that historically the very forces international trade have impeded the development of poor countries.

Gunnar Myrdal and Raul Prebisch maintained that foreign trade has inhibited industrial development in the poorer nations and that the classical doctrine of international trade has resulted in accentuating international inequalities. A quite normal result of unhampered trade between two countries of which one is industrial and the other is underdeveloped is the initiation of a cumulative process towards improvement and stagnation of the latter.\(^{19(a)}\) International forces have been operating against the interest of the predominantly primary producing poor countries because of the reasons listed below:

1. The opening up of the export markets gave a fillip to their export sector resulting in the development of this sector at the cost of other sectors of economy.  

2. The inflow of foreign capital has developed country's natural resources only for export purposes. Rational utilisation and development of natural resources did not take place. Foreign capital thus failed to uplift the indigenous economy. The existence of a potential export sector surrounded by a backward low-productivity sector signifies an imbalance-prone economy. It was Edgeworth who first suggested the possibility that the growing country might be worse-off (Damnification in the words of Edgeworth) after growth than before and it heads to considerable deterioration on the terms of trade of a growing country. The phenomena of "immiserizing growth" occurs only when the technical progress is rather small.

Bhagwati have shown that the phenomenon of immiserizing growth can occur if there is market distortions such that there is a divergence between private and social opportunity cost. The commodity price ratio is not equal to the marginal rate of


Distortions may exist in both the commodity and factor markets. They result from market imperfections or product externality. Sometimes wage differentials as between sectors may create distortion. It is convenient to classify distortion according to their location. They are — (a) domestic and (b) foreign. When a country has monopoly power in trade, foreign distortions take place in the form of divergence between international price and the foreign rate of transformation is very much in the way that a domestic distortion is reflected in the divergence between domestic price and the domestic rate of transformation. Bhagwati's conclusion is that no trade situation may be better than trade distorted by domestic taxes and subsidies. If the sum of the expanding country's marginal propensity to consume importables and the relative source of the exportable industry in the general expansion of output exceeds the sum of the two countries' price-elasticities of demand of imports, the expanding country will become worse off (Immiserisation).

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20(d) Indian Economic, Journal No. 1, July-September, 1973, p. 79

Note: Various forms of distortions—

Price-elasticity of demand is the sum of 'Compensated' elasticity and an income propensity. Given the foreign price-elasticity and the expanding country's compensated elasticity of demand for imports, the source of immiserisation can be found in the pattern of growth. Thus if growth is biased towards the exportable industry, immiserisation will befall the expanding country.

1.13. Theories of Development. 1.13(a) Harrod-Domor Growth Model:

An important early stimulus to economic theorising about development was the Harrod-Domor growth model. Their prime intention was to explore the conditions for stable economic growth in developed countries. The basic assumptions made were:

1. that aggregate supply and demand would be balanced when investment \( I_t \) in any period equalled the change in national income \( (Y_t - Y_{t-1}) \) times the capital output rate \( (K) \), where \( K \) indicates the value of capital required to produce one unit of output by value in single period, and
2. that at equilibrium in a closed economy intended investment would equal intended savings \( S_t \). These assumptions thus produce the equilibrium condition that

\[
I_t = S_t = K (Y_t - Y_{t-1})
\]

By dividing \( S_t \) and \( (Y_t - Y_{t-1}) \) both by \( Y_t \) to produce \( S = \frac{S}{Y_t} \), the savings rate, and \( g \) (equal to \( \frac{(Y_t - Y_{t-1})/Y_t}{Y_t} \)), the growth rate, we obtain the Harrod-Domor growth equations \( S = Kg \) or \( g = \frac{S}{K} \).

Thus the Harrod-Domor model defines the equilibrium conditions for steady economic growth. Despite the fact that the
theory was not conceived with the underdeveloped countries in mind, and that its behavioural assumptions and implications are open to question, it has nevertheless exercised considerable influence on development economics. But the utility of this model lies in the fact that it relates one of the primary objectives of development, the rate of economic growth, to what is often considered its major limiting factor, investment. There is some doubt as to whether it is the level of savings which restricts investment in underdeveloped countries, as application of the Harrod-Domar formula would seem to imply, or whether, as Cairncross has argued, it is limited opportunities for profit that restrain the level of investment with saving levels adjusting to the scale of investment opportunities that exists. Despite this doubt attempts have been made to employ the model with appropriate allowance for capital depreciation to answer such questions as:

1. What rate of savings (and hence investment) is necessary to achieve a target growth rate, given assumed capital-output of specified economy? or

2. What saving and investment patterns will maximise consumption over time?

An important extension of the model is to introduce foreign trade by rephrasing the model as:

The significance of this extension of the model is that import can only exceed exports (and 'b' be positive) if a country is in receipt of either aid, credit or foreign investment. Such a capital transfer enables additional investment to occur. The income-generating effects of this additional investment (as in the above equation), be assumed to be the same as would occur from investment financed by domestic saving. Thus, this 'opening-up' of the model indicates a strategic growth-generating role of aid and credit to poor countries.

1.13(b) Mahalanobis Model:

In 1952 Mahalanobis developed a Single-Sector model based on variables of national income and investment. It was further developed into a two-sector model in 1953, where the net output of the economy supposed to be produced in only two sectors - the investment goods sector and the consumer goods sector. Next he developed the famous four-sector model in 1955, which provided part of the basic rationale for the Indian Planning Commission's draft Second Five Year Plan of India for 1951-1956.

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The Mahalanobis model is not a growth model in the real sense, rather it is an allocation model. This model was employed in establishing national level, sectoral targets for the plan, and in so far as the proposals for achieving these were implemented by government, the model may be said to have influenced economic policy, particularly with respect to the recommended emphasis on the development of heavy industry.

The Mahalanobis model shares the assumptions of the Harrod-Domar model that output is a function of capital only. Being associated with the planning commission, Mahalanobis knew that funds available for investment during the Second Five Year Plan would be approximately Rs. 5,600 Crores and the aid was to provide additional employment to 10-12 million people. To these, he added a 5 per cent per annum increase in national income increase in national income during the plan period. He further estimated one-third of the total investment in investment goods industries, leaving two-thirds for investment in the remaining sectors of the economy.

1.13(c) Lewis Theory of Unlimited supplies of Labour:

Prof. W.A. Lewis has developed a theory of economic development with unlimited supplies of labour. He has tried to apply the Classical model to the problem of economic development of underdeveloped countries. He firmly emphasised
that unlimited supply of labour is more relevant under conditions prevailing in majority of underdeveloped countries. Unlimited labour supply can be said to exist in those countries where population is so large relatively to capital and natural resources, that there are large sectors of the economy where the marginal productivity of labour is negligible, zero or even negative. In these countries, surplus population exists not only in agricultural sector but also found among petty traders, casual workers and domestic servants. Surplus labour is found even in those sectors where people work for wages.

Since there is unlimited supply of labour in these countries new industries can be established or existing industries expanded without limit by drawing labour from the subsistence sector at the current wage rate. The only thing necessary is the supply of capital in adequate quantity.

Assuming unlimited labour supplies at subsistence wage, economic development in underdeveloped countries will depend on the rate of capital formation. Capital is not only created out of rates of profits earned by the people, it can also be created as a result of net increase in money supply, particularly bank credit. Creation of credit speeds up the growth of capital and the growth of real income. It also results in some redistribution of national income in favour of those who can save. It raises both output and employment. It, however, results in some increase of prices because the output
of consumer goods remains constant while purchasing power with the people expands. But this inflationary rise in prices will be temporary. The inflationary process does not go on for ever; it comes to an end when voluntary savings increase to a level where they are equal to the inflated investment.

1.13(d) Rostow's Theory - The Stages of Economic Growth:

Rostow's basic proposition was that all countries are located in one of a hierarchy of developmental stages. These were identified as:

1. The traditional society;
2. The transitional stage: the preconditions for take-off;
3. The take-off;
4. The drive to maturity, and
5. The stage of high mass consumption.

The poor countries are required in Rostow's Scheme to build a launching platform for development in the preconditions stage. In this, radical facilitating changes are required to occur in agriculture, transport and international trade, and entrepreneurial spirit and capacity has to emerge. The required changes in agriculture are towards a market-oriented economy in which food and agricultural raw materials become

increasingly available to the other sectors of the economy; the development of the transport sector and other social infrastructure has an obvious and vital role in economic growth; while export expansion is seen as a necessary accompaniment of increased capital imports and industrial specialisation. The process of economic growth can usefully be regarded as centering on a relatively brief time interval of two or three decades when the economy and the society of which it is a part, transform themselves in such ways that economic growth is subsequently, more automatic. This decisive transformation is called the take-off. The Critical stage is seen as the take-off, when in the space of one or two decades the rate of investment increases sharply from about 5 per cent of G.N.P. to over 10 per cent. During this stage, leading economic sectors are assumed to emerge and create investment opportunities elsewhere in the economy and provide the basis for further investment and self-sustaining growth in stage 4 and 5.

An adequate supply of loanable funds is essential for raising the rate of investment in the economy. These funds may come either through the mobilisation of domestic savings or through import of capital. For obtaining adequate finance for take-off, it is necessary that —

1. The Community's surplus over consumption does not flow into the hands those who will sterilise it by luxury consumption or low productivity investment outlays;
2. Institution for providing cheap and adequate working capital be developed;

3. One or more sectors of the economy must grow rapidly and entrepreneurs in these sectors must plough back a substantial portion of their profits into productive investment, and

4. Foreign capital can profitably be utilised for building up social and economic overheads.24

Another condition necessary for take-off is the emergence of leading sectors in the field of manufacture. The overall rate of growth in an economy is the consequence of different growth rates in particular sectors of economy.

1.13(e) The "Big Push" Theory:

Rosenstein Rodan builds up a case for giving a 'big push' to the economies of underdeveloped countries in order to put them on a path of self-sustained growth.25 According to him, planning for development must aim at jerking the entire social system out of its low level equilibrium and setting of a cumulative process upwards. Smaller efforts mean waste. According to Rosenstein Rodan, small isolated efforts cannot put their economies on the path of economic development. It is only a 'big push' that can liberate economies from the inertia of underdevelopment. Prof. Myrdal, supporting

24. Ibid., pp. 49-50
the 'Big Push' theory, observes that 'Backwardness and poverty naturally make it difficult for a country to mobilise enough resources for a big plan, but they are precisely the reasons why the plan has to be big in order to start development, and that market forces by themselves cannot do it, implies the thesis of the big push. The theory of 'Big Push' emphasises that proceeding 'bit by bit' will not add up in its effects to the sum total of the single bits. A minimum quantum of investment is a necessary condition of success. It necessitates the obtaining of external economies that arise from the simultaneous establishment of technically independent industries. Thus invisibilities and external economies flowing from a minimum quantum of investment are the basic conditions for launching economic development successfully. Rosenstein Rodan distinguishes between three kinds of indivisibilities and external economies. They are:

a) Indivisibility of the production function, especially indivisibility of the supply of social overhead capital (lumpiness of capital);

b) Indivisibility of demand (cAMP lenentarity of demand);

and

c) Indivisibility (Kink) in the supply of savings.

This theory analyses the true nature of the development process by maintaining that development process is a series of discontinuous jumps. It examines the path towards equilibrium and not merely the conditions at a point of equilibrium. The theory is concerned with imperfect markets in underdeveloped countries. It is a high minimum quantum of investment rather than price mechanism in such imperfect markets that takes an underdeveloped economy towards an optimum position. It is pertinent to mention here that Myint holds a different view on the feasibility of this theory. Technical, indivisibilities in social overhead capital is a major argument in favour of 'Big Push' theory but this argument may not be very relevant for most of the underdeveloped countries as they already possess varying degrees of social overhead facilities and hence the 'problem for them is not to have a completely new outfit of these services starting from a scratch, but how much to extend and improve the existing facilities.'

1.13(f) The Marxian Theory of Economic Development:

Karl Marx presents a theory to explain the process of growth. His main analysis concentrates on the task of showing how the economic progress changes the framework of whole societies. Marx's theory of surplus value provides the framework on which he bases his analysis of economic development.

under capitalism. According to Marx, labour power, which the capitalists purchase in the market, has the unique characteristic of producing more than its value. Thus the economy is able to produce a surplus over and above the subsistence needs of the workers, the value of raw materials and equipment used in production. Labour produces equal to its use value while it is paid according to its exchange value which is equal to subsistence. Hence a surplus is created by labour which is appropriated by the capitalists. The goal of capitalism is to increase the mass of surplus value which capitalists receive. An increase in the productivity of labour is the major way by which the capitalists attempt to increase surplus value and other methods have got their own limitations. Marx further observes that foreign trade continues to play an important role as capitalism develops. By means of this trade, older capitalistic countries can take advantage of both larger markets for their manufactures and cheaper foodstuffs and raw materials.

Marx contributed to the theory of economic development in three respects:

a) in broad respect of providing an economic interpretation of history;

b) in the narrower respect of specifying the motivating forces of capitalist development; and

c) in the final respect of suggesting an alternative path of planned economic development.
**Marxist Model of Growth Function:**

\[ \text{Output} = f(L, K, \varphi, T) \]

- \( L \) = Size of Labour force
- \( K \) = Supply of known resources
- \( \varphi \) = The stock of capital
- \( T \) = Level of Technique
- \( 0 \) = Output

**Proposition 2:** Technological progress depends on investment:

i.e. \( T = T(I) \)

Where, \( I \) = investment.

\( T \) = the level of Technological progress.

**Proposition 3:** Investment depends on the rate of profit,

i.e. \( I = I(R^1) \)

\( R^1 \) is the rate of return of capital.

**Proposition 4:** The rate of profit is the ratio of profits to payroll (variable capital) plus capital costs (constant capital)

i.e. \( R^1 = \frac{O-W}{W+Q} = \frac{R}{W+Q} \)

Where, \( O \) = Output.

\( W \) = payroll (variable capital),

\( 0 \) = is profits represented by \( R \).

\( Q^1 \) = means capital goods and inventories used up in production.
Proposition 5: Wages depend on the level of investment i.e.
\[ W = W(I) \]

Proposition 6: Employment depends on the level of investment i.e. employment rises only if investment goes up
\[ L = L \left( \frac{1}{q} \right) \]

Proposition 7: Consumption depends on the wage bill i.e.,
\[ e, = c(w) \]

Proposition 8: Profits depend on the level of technology and the level of consumer expenditure
\[ R = R(T,C) \]

Some of the Marxian tools pertaining to the theory of economic development have become part and parcel of the theory of economic growth. Technological progress and innovations are the mainstay of any theory of economic development. Similarly, capital accumulation is the fundamental idea behind economic growth. Marx contended that economic development does not follow a smooth course but comes about in "fits and starts". He pointed out that a state of underconsumption was the main cause of depression and that for a stable growth a proper balance between investment and consumption was essential. He also indicated that too low or too high wages in relation to total output can adversely affect investment and thus stifle economic growth. Industrial

unemployment is one of the major variables in his System. Some of the variables of the Marxian model are found in underdeveloped countries to a considerable extent such as exploitation of labour, near subsistence wage, concentration of capital in the hands of a few, appalling poverty of the working class and a 'reserve army' of the unemployed and underemployed. Marx's notion of planned development has also become very popular as a method of rapid development in underdeveloped countries.

There are serious internal contradictions in the Marxian System. However, his view of the development process as accruing in an uneven, sometimes discontinuous fashion is appreciated by all modern economists. "Marxism must be understood. For it still remains an appealing political religion challenging the future of poor and rich countries alike".

1.13(g) Up by the bootstraps:

This is one of the strategies of economic development. According to this school of thought, the resources for development should come from within and the burden of development has to be borne by the community itself. The strategy lies in exploding the 'disguised unemployment' in the economy and exploiting the savings potential of this surplus labour force to foster economic development. Prof. J.S. Duesenberry has

pointed out that the surplus labour in agriculture of the underdeveloped countries could be made use for producing capital like roads, irrigation works, etc., which are labour-intensive. So 'Up by the Bootstraps' method advocate development without transplanting the highly mechanised techniques of the advanced countries. History provides the illustrations of the British economy and the Russian economy which developed by domestic resources. This method entails sufferance and sacrifice at initial stages. Hence, this method will not be acceptable in democratic countries where peasants and labour are conscious of their rights. As India has a democratic set-up, low level of living could not be forced on the masses.

1.14. Technology and Economic Development:

1.14(a) Concept of technology:

Technology is often identified with the hardware of production - knowledge about machines and processes. Various terms have been used to describe the required technology. "Schumacher coined the phrase" intermediate "technology, Marsden "progressive technology" while Mathur discusses 'a third world technology which consists of an adaptation of modern methods to the special conditions of the developing world'. A common term among economists is labour-intensive technology. Dickson has promoted the idea of alternative

The concept of appropriate technology has been interpreted in many different ways. The basic approach for deciding the appropriateness of any technology in the given circumstances of our development world depend upon estimates of comparative costs. This evaluation would depend on detailed study of the level of demand in the economy, total cost involved in producing the article with alternative technologies, availability of raw materials, and transportation costs. It is the final delivered cost to the consumer which is the ultimate test of the worthiness of any project, and therefore of any technology.\textsuperscript{35} Thus appropriate technology may be defined as set of techniques, which make optimum use of available resources in a given environment. For each process or project, it is the technology which maximises social welfare if factor prices are shadow-priced.\textsuperscript{36}

In the context of economic development, technical change may be considered as any change in production methods used in an enterprise or industry and thus it is synonymous with innovation. But a mere improvement in technical know-how cannot be called technical change. 'Technological change is not a mere improvement in the technical know-how. It means

\textsuperscript{34} Ibid., p. 96  
\textsuperscript{35} Behari, Bepin, Economic Growth and Technological Change in India, p. 154.  
\textsuperscript{36} Stewart, Francis, op. cit., p. 95.
much more than this. It should be preceded by sociological change also, a willingness and desire on the part of the community to modify their social, political and administrative institutions so as to make them fit in with new techniques of production and the faster tempo of economic activity. 37

1.14(b) Role of technology in economic development:

Technological dependence arises initially from the imbalance in technological capacity, i.e., the capacity to produce technology. Level of technology is an important determinant of economic development. It is only through higher technology that a rapid economic growth can be attained. Technological change is the prime mover in the course of economic development. According to Prof. Schumpeter, innovation or technological progress is the only determinant of economic progress. 38 If there is inertia in the level of technology, the process of growth will stop. It is technological progress that keeps the economy moving. Technology, in fact, can be thought of as the primary resource. Thus technological change can contribute significantly in the economic development of underdeveloped countries. Technological advance is even more important than capital formation. Capital formation alone can bring about economic development to a limited

extent and after that progress stops if there is no technical change. Thus in the process of economic development technical advance is likely to outstrip thrift alone. A nation that spends huge amount on science and technology will tend to grow faster than another country accumulating more capital but spending less on technical development.

1.14(c) Choice and adaptation technology:

Technological change is the foundation on which the process of economic development in underdeveloped countries rests. Technological change in underdeveloped countries is a difficult process and requires massive efforts especially on the part of the government. But despite the difficulties the process of technological change has to be initiated in underdeveloped countries. For this, it is necessary to first identify those branches of the economy which is in most urgent need of technological change. The next course is to decide upon the most appropriate technologies for a particular situation in a country. The choice of 'appropriate technologies' is one of the most challenging in the entire field of economic development. Choice should generally be made on the basis of the following considerations:

(a) Factor Endowment, (b) Technological level already attained, (c) Resources available, and (d) Institutional structure.

According to Vakil and Brahmanand "Each country is to work out

its own salvation, and particularly to find out which production methods are feasible for it. \(^{40}\) Henry Aubery emphasises: "It may be sound procedure to improve technology step by step in many places at once, rather than to sink large portions of a limited capital supply in a few large ventures.\(^{41}\)

A common characteristic of underdeveloped countries is the paucity of capital and abundance of labour. The capital-labour ratio is extremely low. Some holds the view that in such countries efficient production calls for labour-intensive techniques. But it is relevant to conditions prevailing at a point of time. Prof. Nurkse holds the view that underdeveloped countries should adopt labour-intensive techniques of production in the early stages of industrial development.\(^{42}\) But other economists favour the adoption of capital-intensive techniques in such countries. The use of labour-intensive techniques tends to increase production and employment in the economy. On the other hand, the adoption of capital-intensive techniques tends to accelerate the capital-formation and then to maximise productive capacity and employment in the long run.

It is rather difficult to decide as to which technique should be adopted in an underdeveloped country. For a 'continuing and compounding effect' on the rate of growth of income,

\(^{40}\) Wakil, C.W. Poverty and Planning, p. 171.


\(^{42}\) Nurkse, R. op. cit. ("Trade theory and Development Policy" in Economic Development in Lated American (ed.) A.S. Ellis, 1961, p. 45.)
capital-intensive techniques should be confined to the capital goods sector. Galenson and Leibenstein hold that instead of the aim of maximising immediate output and employment, the aim should be growth. The creation of less employment and output now may lead to more employment at a future date. Labour intensive techniques might generate immediate output but very little surplus since the wage bill would be large. Capital-intensive techniques should therefore be chosen because, by minimising the wage bill, they will increase the reinvestable surplus.

Appropriate technology would in general make greater use of unskilled labour, but in some cases capital-intensive methods would be more appropriate if skilled labour, rather than capital, was the main constraint. In a broader sense, technology must be 'appropriate' with respect to the wider economic and political objectives of the society in question and also 'appropriate' with respect to scale of output, simplicity of operation, maintenance and repair and use of local inputs. The search for 'appropriate' technologies must avoid the short-falls of the static investment criteria.

43. Lobb, M. Some Aspects of Economic Development, p. 54
44. Colman David and Nixon Fredrick. Economics of Change in less Developed Countries, p. 250.
45. Ibid.
1.14(d) **Project-wise technical assistance**

Technical assistance can be more easily lent for specific projects, and the benefits and returns from the assistance can be more clearly discerned. From both the donor's and the recipient's points of view, project assistance has certain advantages, though the disbursement of assistance tends to be a more lengthy process than in the case of non-project assistance.\(^47\) The World Bank and individual donor countries as well, also have preference for supporting projects as a part of development programme rather than distributing assistance for unspecified purposes.\(^48\)

Mere transfer of modern technology from advanced to backward countries cannot solve the problem of development. The problem is not that of transplanting technology available in industrially advanced countries. Imported technology has to be tested and adopted to the particular environment and needs of the underdeveloped countries.

1.15 **Trade Versus Aid**

'Trade' and not 'aid' has become a popular aphorism in developing countries in recent years. It is relevant here to consider whether a unit of foreign exchange from export is really worth more than a unit of foreign exchange from international assistance. If the meaning of aid is taken as a free

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48. Thirlwall, A.P. Growth and Development with Special Reference to Developing Economy, p. 319.
transfer of resources a unit of foreign exchange from exports can never be as valuable as a unit of foreign exchange from aid. The reason is that exports do not provide additional resources for investment directly, only indirectly by the opportunity provided to transform domestic resources into goods and services more cheaply than if transformation had to be done domestically. Aid, on the other hand, both provides resources directly, and also indirectly by saving the excess cost of import substitution. Therefore, it is essential to examine the role of trade and external resources to see the extent to which one can be a substitute for the other.

A dollar received in trade and one received in aid are not very much different. The basic differences may be said to lie in the fact that the aid-dollar goes directly into capital formation while the dollar received through trade may or may not be used as such in full; in a wider sense export trade may be said to be comparable to aid as in a sense it supports some industrial or agricultural production.

In the process of rapid transition from underdevelopment to self-sustained growth every developing economy comes to face a foreign exchange constraint. Alternatives open to bridge the foreign-exchange gap are:

(a) inflow of external resources in the form of financial assistance;

b) reduction of imports through import-control measures or import substitution; and

c) expansion of export earnings or export-promotion.

A large part of the actual aid flow being in the form of loans of varying terms, it carries with it a burden of repayments of interest and amortisation payments while foreign exchange earned through exports can be used as desired and has no liability of any form. Generally it is assumed that any external assistance which a country receives, will, somehow, be usefully employed and will set into motion those dynamic processes which are said to be associated with accelerated growth.51

The economy of an underdeveloped country can be divided into three sectors:

a) the primary sector, which is very large;
b) a small but growing industrial sector and

c) an export sector based chiefly on traditional items.

The basic structure of export sector in such economies enables them to export goods with large raw-material content and relatively 'valued-added'. Because of technological progress leading to increased production of quality and sophisticated goods, world demand does not favour expansion of trade in such goods. On the other hand, demand for primary products is largely income inelastic. So the traditional

exports are unlikely to provide increasing foreign exchange earnings for the less developed economies in future. Of the remaining two sectors, the agricultural sector, in a labour-surplus economy like India, creates more problems than solves on the foreign exchange front, because of a growing population pressure internally and a very high efficient production function in agriculture in the advanced countries. Thus industrial sector is the only hope even for the improvement of the production function in agriculture. A dynamic industrial sector may be evolved which would concentrate on production goods needed for domestic consumption as well as for export. In course of time the balance in total export value will shift away from the traditional natural resources-specific items to new dynamic components in the export sector and the economy may be in a position to produce goods incorporating cheap labour with relatively little of the scarce capital and indigenous and sophisticated borrowed technology and enterprise. Only export substitution of this type may be helpful to earn foreign exchange to provide for the needs of the industrial sector leading to its expansion and a gradual shrinkage of the traditional export sector. Thus trade may engender forces of growth in such economies. International trade depends upon enlarging the technological base of the economy for its success. Hence it carries with it a built-in-process of transformation. If an underdeveloped economy has

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determined to accelerate its rate of growth to the extent needed to pull it out of the 'poverty' and the 'Malthusian' trap it cannot do without more and more of imports. It is therefore apparent that in such a situation the choice left with it "either to enjoy complete external equilibrium with a low growth rate or to diversity and to expand its exports in order to quicken its pace of growth to achieve a new equilibrium", because it is impossible to grow when there is chronic disequilibrium. The case for a strategic role of exports in the underdeveloped countries especially in manufactures has been brought out in a number of studies undertaken by the UNCTAD Secretariat. The various studies point out the limited export prospects for primary commodities and recommends the urgent need for diversification and expansion of the export trade of developing countries in manufactures in order to accelerate the economic development and to raise the standard of living.

In a predominantly agricultural economy such as India, the expansion of the agricultural sector, by providing a natural outlet for the products of the industrial sector and by supplying labour force along with other inputs like food and raw materials, will facilitate growth of the industrial sector. Thus neither trade nor aid alone can serve as the main engine of growth. Hence it may be said that trade and

aid facilitate growth because when trade is treated as an engine of growth it does not, by itself, take into account the expansion of agricultural productivity in the domestic substance sector as the sine qua non of success. It also does not involve the encouragement of domestic entrepreneurship and innovate capacities in the underdeveloped economies. Therefore, it can plausibly said that it is these elements that constitute the critical components of the development efforts. Once the economy moves ahead dynamically, the potentialities offered by foreign trade accelerate the pace of development. The same holds true for foreign aid.\(^56\)

"A more rapid growth of foreign demand of their principal exports would not have permitted most poor countries to raise their import of capital goods by anything like the amount of improvements in their receipts. Consumption would also have increased. Again to this extent, it is more savings or more aid that is needed."\(^57(a)\) In effect, therefore, a country's ability to export depends in large measure upon its economic vitality and its productive efficiency in the agricultural and industrial field. Thus both aid and trade are required for economic development in a underdeveloped economy like India. The only way to survive the present foreign exchange crisis is to boost our exports in all possible ways.\(^57(b)\)


57.(a) Benham, F. Economic Aid to Underdeveloped countries, Royal Institute of International Affairs, Oxford University Press, 1961, p. 150.

57.(b) Sainy, H.C. India's Foreign Trade, p. 236.