CHAPTER II

EXPORTS AND ECONOMIC DEVELOPMENT:

A THEORETICAL AND HISTORICAL FRAMEWORK

2.1: INTRODUCTION :

It is against this background of the survey of the various methods adopted in India to relieve her foreign exchange constraint on growth that the role of Indian exports is to be viewed. But before doing so, it is worthwhile to probe into the theoretical and historical aspects of exports-growth relationship. This is the main task of the present chapter.

The available theoretical literature on the subject presents two quite opposite views. It is frequently argued, on the one hand, that the conclusions from the static equilibrium analysis of traditional trade theory are irrelevant for interpreting the problems of present day developing countries which are inherently dynamic in

character[1] and, on the other hand, it is contended that
with suitable modifications, the traditional trade
theory can be adequately used to tackle the dynamic pro-
blems of development.[2]

In the historical context, it is pointed out that
international trade has contributed substantially to
the process of development of the then developing coun-
tries.[3] By contrast, it is argued that foreign trade
has actually favoured the advanced countries at the cost
of the underdeveloped countries and thus accentuated
international inequality.[4] There is also a third group

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[1]J.H. Williams, "The Theory of International Trade
Reconsidered," Economic Journal, June, 1929.

R. Robinson, "Factor Endowment and Comparative
Advantage," Quarterly Journal of Economics, May, 1956 &
August, 1956.

G. Myrdal, "Rich Lands and Poor," (New York :
Harper & Row, 1957)

[2]D.M. Bensuan - Butt, "A Model of Trade and Accumu-
lation," American Economic Reveiw, September, 1954.

H. Myint, "The 'Classical' Theory of International
Trade & the Underdeveloped Countries," Economic Journal,
June, 1958.

R. Nurkse, "International Trade Theory and Develop-
ment Policy," Economic Development for Latin America,

[3]D.H. Roberton, "The Future of International Trade,"
in Readings in the Theory of International Trade, (American
Economic Association, Blakiston Co. 1949)

which adopts a neutral position and offers some special observations on the dynamic character of trade as a transmitter of growth.[5]

In the voluminous literature on trade-growth relationship, efforts were made to reconcile the gains from trade with those from growth. But there has been no systematic development of the trade theory which could harmonize with the assumptions of growth theory and at the same time explain the various historical experiences of different economics with respect to trade-growth relationship. It is now possible, following Professor

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Footnote 3 contd...

G. Haberler, International Trade and Development, (Cairo: National Bank of Egypt, 1956)

A.K. Cairncross, Contribution of Trade to Development, an essay in Factors in Economic Development, (George Allen & Unwin, London, 1966)

[4]H.W. Singer, "The Distribution of Gains between Investing and Borrowing Countries", American Economic Review, Papers and Proceedings, May, 1950.

G. Myrdal, Development and Underdevelopment, (Cairo: National Bank of Egypt, 1956)

R. Prebisch, "Economic Development of Latin America," Bulletin for Latin America, February, 1962.

[5]J.R. Hicks, "Development and Trade", Essays in World Economics, (Oxford, Clarendon Press, 1959)

R.Nurkse, "Trade Theory and Development Policy", Economic Development for Latin America, H.S.Ellis,Editor, (New York: St.Martin's Press, 1961).

Kindleberger[6] and Haring,[7] to tie up the various strings of the literature on trade-growth relationship into a dynamic form that could also explain the historical developments of different economies. This dynamic approach to trade-growth theory can be summarized under the following three broad models:

(i) Export (or trade) as a leading sector of growth

(ii) Export (or trade) as a lagging sector of growth

(iii) Export (or trade) as a balancing sector of growth.

The three sections that follow will explain, with suitable historical illustrations, each of the above three models of the dynamic trade-growth theory. Section 2.5 tried to explain the "carry-over problem",[7a] namely, why the growth in exports in some countries has not carried over to other sectors and led to more widespread development in the domestic economy? This is followed by summary/and conclusions in the final section 2.6.

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[6]C.P. Kindleberger, Economic Development, (New York: McGraw Hill, 1958); and Foreign Trade and the National Economy, (Yale University Press, 1964).

[7]J.E. Haring, "Dynamic Trade Theory and Growth in Poor Countries," Kyklos, Vol. 16, 1963

[7a] G.M. Meier, Leading Issues in Development Economics, (First Ed., Oxford University Press, 1964)

2.2: EXPORTS (or TRADE) AS A LEADING SECTOR OF GROWTH:

There are economists such as Professor Haberler,[8] Carincross,[9] Robertson,[10] Rostow,[11] and many others who support the traditional view that foreign trade can contribute significantly to the development process of the present-day developing countries, and that the gains from trade merge with the gains from growth. According to this theory, a rise in exports lead to an increase in the national income through the establishment and expansion of the other activities and as such exports are "leading sector" (Rostow) or "engine of growth" (Robertson).

Until recently, the various arguments as to how trade stimulates growth have been stated in general verbal terms. Recently, many economists have developed mathematical and non-mathematical models which incorporate the role of trade in economic development. This trade-

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[8]G. Haberler, International Trade and Economic Development, (Cairo: National Bank of Egypt, 1967)

[9]A.K. Carincross, Contribution of Trade to Development, an Essay in his "Factors in Economic Development", (George Allen and Unwin, London, 1962).

[10]D.H. Robertson, Essays in Monetary Theory,(London, 1940)

[11]W.W. Rostow, The Stages of Economic Growth, (Cambridge University Press, 1960).

growth models can be grouped into two: (a) Theoretical models;[12] (b) Policy models.[13] The theoretical models can, further, be sub divided into three sub-groups :
(a_1) Demand-motored models; (a_2) Supply-motored models; and (a_3) Models combining the leading features of (a_1) and (a_2).

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[12](i)   Baldwin R.E., "The Role of Capital Goods Trade in the Theory of International Trade," American Economic Review, No.56, September, 1966.

(ii) Black J., "Trade and Long-Run Growth Rate," Oxford Economic Bapers, 22, March, 1970.

(iii) Bardhan P.K., "Equilibrium Growth in International Economy," Quarterly Journal of Economics, August, 1965.

(iv)   Bhagwati J., "International Trade & Economic Expansion," American Economic Review, Vol.48, 1968.

(v)   Caves R.E., Trade and Economic Structure, (Cambridge: Cambridge University Press, 1960)

(vi)   Corden W.M., The Effects of Trade on the Rate of Growth, in Trade, Balance of Payments and Growth, ed. J. Bhagwati and others (London:North Holland,1971)

(vii) Johnson A.S., "Protection and the Formation of Capital," Political Science Quarterly, June 1968.

(viii) Kemp M.C., The Pure Theory of International Trade, (Prentice Hall, 1964)

(ix)   Kindleberger C.P., "Foreign Trade and Economic Growth: Lessons from Britain and France, 1850 to 1913," The Economic History Review, Vol.14, No.2,1961.

(x)   Linder S.B., An Essay on Trade and Transformation, (Stockholm, 1961)

(xi)   W.Beckerman, "Projecting Europe's Growth", Economic Journal, December, 1969.

The theoretical models try to show, how growth can be higher under trade than without it. These models are "simplified" by considering limited number of countries (usually two) and/or limited number of commodities (usually two). In order to isolate the different effects of trade on growth, they are usually based on unrealistic assumptions, thus giving little convincing picture of the real world. However, they are

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Footnote 12 contd...

(xii) Lamfalussy A., The United Kingdom and the Size: An Essay on Economic Growth in Western Europe, Richard D. Urwin, Homewood Inc. 1963.

(xiii) Caves R.E., "Export-led Growth: the post-War Industrial Setting," Induction Growth and Trade, W.A. Ellis, M.F.G. Scott, J.N.Walfe, editors, (Oxford: Clarendon Press, 1970).

[13](i) Chenery H. and Bruno M., "Development Alternatives for an open economy: The case of Isreal," Economic Journal, (March, 1962).

(ii) Chenery H. and Strout A.M., "Foreign Assistance and Economic Development," American Economic Review, (September, 1966);

(iii) McKinnon R., "Foreign Exchange Constraints and Efficient Aid Allocations," Economic Journal, (June, 1964).

(iv) Linder S.B., Trade and Trade Policy for Development, (New York: John Wiley and Sons).

(v) Bhagwati J., "Nature of Balance of Payment Difficulties in Developing Countries," in Measure of Trade Expansion of Developing Countries," (Japan Economic Research Centre, October, 1966).

(vi) Findley R., "The 'Foreign Exchange Gap' and Growth in Developing Economies," in Trade, Balance of Payments and Growth, editions, J.Bhagwati and others (North Holland, 1971).

built up with clear mind: "if international trade theory is to, be a useful aid to throw light on practical issues it clearly must include a rigorous theoretical analysis of the effects of trade on growth."[14] The policy models, on the other hand, try to show how far foreign exchange resources can raise economic growth of an economy, given modern environment. These models contain varia- bles reflecting the economic goals of the economy and the main instruments of government policy and specify the more important structural relations connecting them. Obviously, the complexity of the model increases with every addition of the objectives, instruments and stru- ctural limitations. The list of typical objectives, instruments and structural limitations is :

(i)   Objectives: maximum income, full employment;

(ii)   Instruments: capital imports, fiscal and trade policy, investment allocation;

(iii)   Structural limitations: demand pattern, balance of payment, labour and capital supply and their requirements.

In what follows, we shall first survey the various arguments stated in general verbal terms and then shall

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Footnote 13 contd..

(vii) A. Manne and Markawity (ed.), Key Sectors of the Maxican Economy, 1960-70, in Studies in Process Analysis, (New York: John Wiley and Sons, 1963).

[14]Corden. op.cit.

try to bring out the main points of a representative theoretical model in each of the sub-group stated above. So far as the policy models are concerned, only those aspects shall be considered which are relevant to our study since these models try to show how foreign exchange resources in general can raise economic growth.

2.2.1: VERBAL ARGUMENTS :

In this "Interregional and International Trade," Ohlin pointed out that "........ the supply of industrial agents may sometimes more adequately be described as the result of trade than as its causes......"[15] This aspect of Ohlin's trade theory proved to be decisive in trade-development relation during the more recent years. However, he did not go beyond the neo-classical reallocation approach here. Even if these remained in the back-ground in his main work, he seems to be much more aware of the growth effects of trade in an ILO report by a group of experts under the Chairmanship of

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[15]Ohlin B., Interregional and International Trade, (Cambridge, Mass.: Harvard Economic Studies, 1933), p.11.

Ohlin. In this report, it is stated that "the most
important contribution of freer trade to the rising
living standards is through its effects on economic
growth," by economies of scale and of specialization,
improvements in business organization and more rapid
diffusion and application of technical advances. In

In more recent years in 1956, Haberler in his
Cairo lectures, "International Trade and Economic
Development,"[16] adopts a more strongly worded and
explicit role of trade in the process of growth. He
visualises a truely classical role for trade in the
following terms: "If we were to estimate the contri-
bution of international trade to economic development,
especially of the under-developed countries, solely
by the static gains from trade in any given year on
the usual assumption of given production capabilities...
we would indeed grossly underrate the importance of trade.
For over and above the direct static gains dwelt upon
by the traditional theory of comparative costs, trade
bestows very important indirect benefits, which also
can be described as dynamic benefits, upon the partici-
pating countries."[17] He then goes on listing and

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[16]op. cit.

[17]Haberler. op.cit.

explaining the various "dynamic benefits" affecting growth which are included in the following passage of his lecture: "First, trade provides material means (capital goods, machinery, and raw materials and semifinished materials) indispensable for economic development. Secondly, even more important, trade is the means and vehicle for the dissemination of technological knowledge, the transmission of ideas, for the importation of know-how, skills, managerial talents and entrepreneurship. Thirdly, trade is also the vehicle for the international movement of capital especially from the developed to the under-developed countries. Fourthly, free international trade is the best antimonopoly and the best guarantee for the maintenance of a high degree of competition."[18]

2.2.2.1: Demand-motored trade-growth model:

Taking demand-motored model, first, Professor Kindleberger in his "Foreign Trade and Economic Growth: 'Lessons from Britain and France, 1850 to 1943'[19] puts

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[18]Haberler, op.cit.

[19]op. cit.

forward non-mathematical 'model of Economic Growth'
in which expanding exports lead to an increase in
national output in the following simple manner which
he calls 'models': How does export-demand work$?
Expansion of exports can lead to growth either through
stimulating technolggical change and investment or
by spilling demand over into other sectors.

(i)   Effects of technological progress on trade-
       growth relations :

Under conditions of full employment, exports may
expand due to favourable change in demand abroad,
generating pressure on domestié resources resulting
into cost-reducing innovations. This improves the
terms of trade (whether barter or single factorial)
enlarging the gains from trade and will increase income
which through Harrod-Domar growth model stimulates
growth.

However, cost reducing innovations improve terms
of trade only in certain conditions. For the analysis,
let us classify with Professor Hicks'[20] technological

[20]J.R. Hicks, "An Inaugural Lecture," Oxford
Economic Papers, N.S. Vol.5, No.2, (June, 1953)

progress into three groups. (i) neutral innovations
which increase the productivity of all industries
uniformly. Under such innovations, if money incomes
rise to the full extent of the productivity, the
simplest case, the prices of products will remain
unchanged and nothing will happen. But the rise in
income will also lead to an increase in demand for im-
ports leading to an increase in their prices. This
will have unfavourable impact on country's terms of
trade. If these losses are large, they might cancel
out most of the prospective gains in the growth of
income. Naturally, the picture becomes more compli-
cated if incomes do not rise to the full extent of
productivity increase. (ii) If technological progress
is in the export sector, then we call it, with Professor
Hicks, an export-biased growth. If the progress would
decrease or leave unchanged the marginal productivities
of the factors in export sector, it will improve the
terms of trade, provided the prices of imports remain
unchanged. On the other hand, if the progress (which
in usual case) leads to an increase in marginal produ-
ctivities of the factors of production in export sector
then it will lead to deterioration in its terms of trade
provided the prices of imports remain unchanged. In
both the cases, what the exact amount of the change in

terms of trade depends on many factors. Demand factors and the degree of adaptability in the countries concerned are the most important. For example, if demand for its exports is elastic and deteriorating terms of trade might lead to decrease in its exports earnings while volume of export may increase. Under such circumstances, the country's whole productivity gain might be exported outside. In such a case, growth by means of export is a dead end. This will have negative effect on real income of the country. But, the net effect on the real income will depend upon whether production of importables increases or not with the increased supply of factors in import industries due to technological progress in export sector. However, export-biased technological progress is usually deterimental to underdeveloped countries under the conditions of substitutability in import industries.[21] (iii) If technological progress concentrated in import competing sector, we have import-

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[21]Here it must be pointed out that the possibility of impoverishing or immiserizing growth which was first pointed out by F.Y.Edgeworth, "The Theory of International Value," Economic Journal, (March, 1894), from his reading J.S. Mill's analysis of effects of improvements of production in export industries, and later on by J. Bhagwati, "Immiserizing Growth" in Review of Economic Study, (1958). This is the case in which a country may be worse off after growing than before because the loss due to deteriorating terms of trade has outweighed the gain due to expansion. The conditions under which such growth can occur are: continuous increase in imports

biased growth. This is the case which is most favourable since it will always have positive effects on real income which can be shown in the same manner as before. In short, it is of critical importance whether the progress is neutral or export or import-biased.

(ii) Effects of factor-endowment on trade-growth relation :

Under conditions of unemployed or under-employed resources, expanding export sector due to increase in external demand will attract resources from unemployed or the under-employed and low-production sector, which is an added gain from trade that is available even when the terms of trade do not change. Further, if entrepreneurship is lacking due to lack of investment opportunities, an increase in exports will enhance investment opportunities and so also entrepreneurial activities.

Footnote 21 continued ...

of the developing economy even at the deterioriting terms of trade; and continuous growth of export sector due to continuous increase in supply of factors in the sector even though the sector is facing inelastic demand outside. Curiously enough, even though these conditions are quite stringent, Professor Kindleberger sees some possibilities or prospects of such a growth to occur in some underdeveloped countries especially those of Latin America and the Far East as "much has been made in Latin America of the inelasticity of demand in the U.S. and Europe of primary products - probably too much, for no attention has been paid to the substantial expansion of primary production that has already taken place with profit on to the room that remains for further expansion as the developed

F.N. contd...

However, there are cases of deteriorating terms of trade in the event of increase in factor endowments. We shall start our exposition in terms of Rybazynski theorem[22] which states that if one of the factors of production increases, the others being constant, the output of the good using the accumulating factor intensively will increase and the output of the other good will decrease in absolute amount, provided that commodity an-d factor prices are being kept constant. To prove the theorem, a critical assumption of homogeneous production function of first degree has to be made. Then the effects on commodity prices depend on, in which industry the increasing factor is being used intensively. Further, the effects on national income depend on type of the accumulating factor and on factor intensities. If, for example, the increasing factor is used intensively in the export industry, the volume of exports will increase. A large export production means a sub-

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Footnote 21 continued...

countries transform further and shift more resources out of import - competing goods." See Kindleberger, Foreign Trade and National Economy. pp. 106-107.

[22]T.M. Rybazynski, "Factor Endowment and Relative Commodity Prices," Economica, (November, 1955)

stantial amount of new exports to offer to its trading

partners, causing a deterioration in the terms of

trade. This negative influence on the growth of the

real income outweighs the positive effects on national

income from the growth of export production. If, on

the other hand, the accumulating factor is used inten-

sively in the import-competing industry,/growth will
                                        and

have a strong beneficial effect on real income.

2.2.2.1: The Supply-motored models :

Now coming to the supply-motored models, we have

a most illuminating analytical model covering the

various effects of trade on growth by W.M. Corden in

his The Effects of Trade on the Rate of Growth,[23] where

he compares a country's growth path under free trade

with that of without it. Essentially he argues that

opening up trade may affect the rate of growth through

(i) "impact"effect, namely, static gains of trade;

(ii) "gains from trade" effect resulting from increasing

the rate of capital accumulation due to trade;
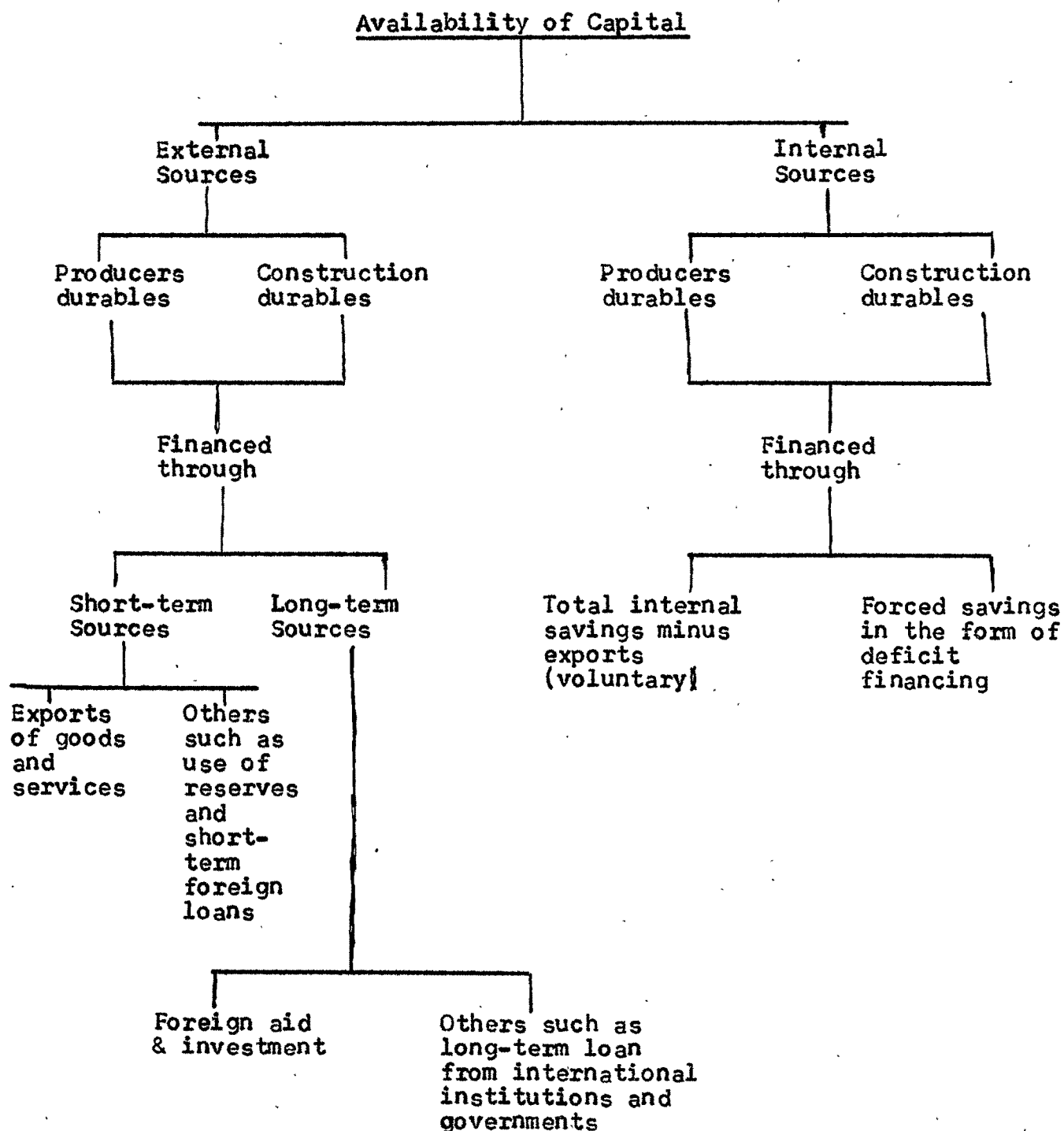
(iii) "substitution" effect operating through a change

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[23]op. cit.

in relative prices of investment goods due to trade;
(iv) "income distribution" effect; (v) "factor
weight" effect. These five effects are based on the
assumption that the country concerned is small, facing
given constant terms of trade; (vi) "terms of trade"
effect. Let us briefly describe these various effects
one by one.

In order to explain these effects of trade, he
starts with a growing, closed economy with two factors
of production labour and capital and an aggregate
constant-returns to scale, meo-classical production fun-
ctions of investment goods (I), consumption goods (C),
imports (M) and exports (X). Thus the model has "two
level"*production function. For exposition, the model,
assumes that at a point of time when trade starts, the
rate of growth of capital is greater than the given rate
of growth of income. When the trade starts at time t_o,
real income increases due to the following two effects
of the trade:-

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*Inputs of I and C are M and X; and that of M and
X are labour and capital.

(i) The "impact" effect is nothing but the net addition to growth rate due to static gains to the initial growth rate without trade; (ii) the "gains from trade" effect, with a permanent rise in income due to static gains from trade and with constant propensity to save, some part of the increased income will then be saved and invested through partly (a) saving-investment process internally; and (b) saving-investment process externally. The internal process is quite simple and need not be elaborated here. Externally, a part of the savings will form a surplus of the export sector which will be converted into investment through import of capital goods out of the external earnings, thus raising the investment level over what it would have been otherwise. It is in this way that the export sector performs the function of a quasi-capital goods sector, making available to the economy indispensable but not internally produced capital goods. But the role of export sector as quasi-capital goods sector depends on the structural characteristics of the economy, namely, the relation between the total demand for capital goods and their availability. Thus the availability concept can be represented by the following three Table:

Availability of Capital

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                    Availability of Capital
                              |
            ┌─────────────────┴─────────────────┐
       External                            Internal
       Sources                             Sources
          |                                   |
    ┌─────┴─────┐                     ┌───────┴───────┐
Producers   Construction         Producers      Construction
durables     durables            durables         durables
    └─────┬─────┘                     └───────┬───────┘
      Financed                            Financed
      through                             through
          |                                   |
    ┌─────┴─────┐                   ┌─────────┴─────────┐
Short-term   Long-term         Total internal      Forced savings
Sources      Sources           savings minus       in the form of
   |                           exports             deficit
   |                           (voluntary)         financing
┌──┴──┐
Exports  Others
of goods such as
and      use of
services reserves
         and
         short-
         term
         foreign
         loans

            ┌──────────┴──────────┐
        Foreign aid          Others such as
        & investment         long-term loan
                             from international
                             institutions and
                             governments
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A more relevent question to ask is: How much growth in the national income is generated through exports

by these two effects. We can measure it through the magnitude of the foreign trade (export) multiplier[24] as follows :

$$Y = \frac{i - \frac{Mx}{X}}{1 - C'} X + \frac{1 - \frac{Mi}{I}}{1 - C'}$$

Where,

Y — Gross National Income

C — Total consumption

I — Gross investment

x — Total exports

M — Total imports

Mx — Import content of exports

Mi — Import content of Investment

Mc — Import content of consumption

$c' - c \left(1 - \frac{Mc}{C} \right)$

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[24] This method is adopted from an unpublished Ph.D. Thesis by Youngil Lim, "Export Industries and Pattern of Economic Growth of Ceylon," (University of California, Los Angeles, 1965).

He has derived the multiplier relation as follows:

Let $Y = C + I + X - M$

$C = cY$

$M = M_x + M_i + M_c$

(iii)   Oepning-up trade lowers the domestic prices of importables relative to the prices of exportables. If I is M intensive, the price of I relative to the price of C will fall while if C is M intensive, the price of C relative to the price of M will fall. There is a "substitution" effect if a fall in the relative price of I causes the ratio of I to C to rise (or vice versa for a rise in the prices). This will raise the rate of growth. (iv) If factor intensities of X and M are different so that the opening up of the trade shifts income distribution towards the factor intensive of X

Footnote 24 continued...

$$Y = C + I + X - (M_x + M_i + M_c)$$

$$= (C - M_c) + (I - M_i) + (X - M_x)$$

But, $C - M_c = C - \dfrac{M_c \cdot C}{C} = cY - \dfrac{M_c \cdot cY}{C}$

$$= cY \left(1 - \dfrac{M_c}{C}\right) = Yc' \text{ where } c' = c\left(1 - \dfrac{M_c}{C}\right)$$

Therefore, we have:

$$Y = c'Y + (I - M_i) + (X - M_x)$$

$$Y - c'Y = (I - M_i) + (X - M_x)$$

$$Y(1 - c') = I\left(1 - \dfrac{M_i}{I}\right) + X\left(1 - \dfrac{M_x}{X}\right)$$

$$Y = I \dfrac{1 - \dfrac{M_i}{I}}{1 - c'} + X \dfrac{1 - \dfrac{M_x}{X}}{1 - c'}$$

$$= \dfrac{1 - \dfrac{M_x}{X}}{1 - c'} X + \dfrac{1 - \dfrac{M_i}{I}}{1 - c'} I$$

and if M intensities of I and C are identical so that the
relative price of I remain constant and if propensity
to save out of profit (s_p) is greater than that of wages
w_p (where s_p and w_p are constant); then overall saving
propensity is a weighted average of s_p and w_p, the weights
depend on income distribution. If X is capital intensive,
the overall propensity will rise, raising the rate of
capital accumulation and consequently the rate of growth
and if M is capital intensive reverse will be the result.
(v) The factor - weight effect can be explained as follows:

With a constant-returns-to-scale aggregate production
function, the rate of growth of output is a weighted ave-
rage of the capital and labour growth rates. The effect
of foreign trade on growth is through change in the factor
weights. If Y = growth rate of output, n = growth rate
of labour, k = growth rate of capital, w = wage rate,
and r = rental on capital goods, with factor prices equal to
is values of their marginal products, then with constant-
returns-to-scale model :

$$Y = n \left(w \frac{N}{Y}\right) + k \left(r \frac{K}{Y}\right)$$

where the expression in brackets (the weights) are the
factor shares. Now opening-up trade alters Y/N and Y/K

in the same proportion. But it may alter the weights
by altering the ratio w/r in accordance with income
distribution effect. (vi) "Terms of trade" effect:
We shall consider this effect in greater details in
the next section and hence we need only to point out here tha
that the terms of trade may change (in favour or against)
either as a result of change in country's offer (less
or more) with a given foreign demand, or may change
externally (in favour or against the country) as a
result of change in foreign demand of (if foreign reci-
procal demand is less then perfectly elastic or infini-
tely elastic) given country's offer. Of course, the
terms of trade may also change as a result of combined
change of country's offer and foreign demand, but this
is a more complex case for analysis. With the improve-
ment in terms of trade, the absorption - possibility frontier
would shift outward giving static gains from trade. When
the improvement in terms of trade is continuous, then the
productivity of transformation through trade is steadily.
rising. This will lead to all the above effects in a
favourable manner on rate of growth.

We can show the various effects of trade on growth
by means of a figure 2.1, where rates of growth of real
income, ($\bar{Y}$) capital ($\bar{K}$) and labour ($\bar{I}$) are shown on Y-
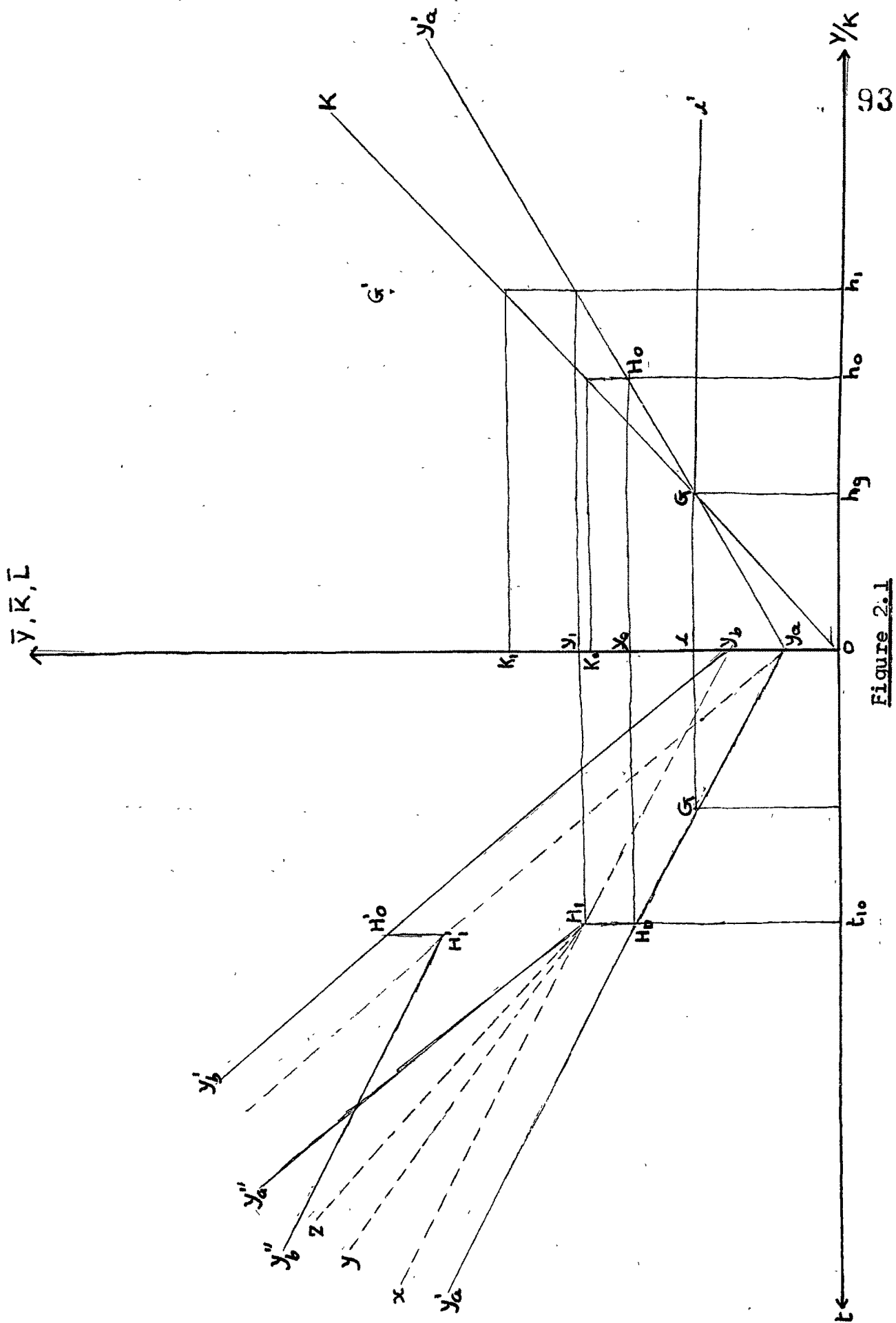
$\overline{Y}, \overline{K}, \overline{L}$

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Figure 2.1

The figure combines the leading features of the figures given by W.M.Cordon: "The
Effects of Trade on the Rate of Growth" and by Linder: "An Essay on Trade and Transformation"

axis, and time (t) is shown to the left and Y/K to the
right of origin (O) on the X-axis. The horizontal line
ll' shows the given growth rate of labour and OK the rate
of growth of capital for a given propensity to save.
The growth rate of real income is shown by yaya on left
as well as on right of the Y-axis. The three growth rates
are the same at G under the constant-returns-to-scale
assumption which means that when labour and capital are
growing at the same rate, output must also grow at that
rate. All the growth lines are straight lines drawn on
the assumption of Cobb-Douglas production function (output
growth being a weighted average of labour and capital
growth with weights constant). In reality, however, the
growth paths would not be straight lines, it is more
true for growth path under trade because of the various
effects of trade on growth, particularly, due to shift
in terms of trade. However, for simplicity we have assumed
away such complexities.

First, referring to the right of Y-axis in the figure,
at time t_{10} in the closed economy, Y/K is ho and the
rate of growth of output yo. The system will tend towards
the steady state at G where Y/K is hg and the rate of
growth is l, equal to growth rate of labour. The opening
of trade at time t_{10} raises Y/K to h_1. Temporarily it

raises the growth rate to some point, say at G' shown vertically over h_1. This is impact effect. But growth rate of capital will increase from k_o to k_1 because Y/K has risen. With saving propensity remaining unchanged, this will pull down the growth rate of output to y_1. This is capital accumulation effect. However, since capital is growing faster than labour, leading to a rising capital-labour ratio, Y/K steadily falls due to diminishing returns to capital, till it reaches the steady state at G, leaving Y/K as before.

Now, we refer to left side of the Y-axis in the figure. Line $y_a y'_a$ is the closed economy growth path. The economy is opened up at time t_{10}. This will raise the rate of growth of output to H_1, giving $H_o H_1$ the impact effect. If there are no other effects, this growth rate will be carried forward over time, representing the growth path by y_1 x which is always greater than $y_a y'_a$ by the amount $H_o H_1$ in subsequent years. This y_b x Linder[25] calls 'opening up locus' as "it connects all points to which reallocation gains would bring up if we open up trade at time t_o, $/ t_1$, t_2, ... t_n. This

[25]Linder, An Essay on Trade and Transformation, (Stockholm, 1961)

'opening-up locus' is a very useful tool as from any point on it (such as y_b), we may draw a line (such as $y_b x$) parallel to growth path $y_a y'_a$ with trade opened up at time t_{10} in the figure." But there is capital accumulation effect also which raises further the growth path from $H_1 x$ to $H_1 y$. In similar fashion all the other effects will raise the growth rate from $H_1 x$ and the resulting growth path will be $H_1 y''_a$. In short, y_a - H_0 - H_1 - y''_a describes the growth path of an economy with trade opened-up at time t_{10}. Similarly, $y_b y'_b$ is the trade growth path when trade is ppened up at time t_0, which is faster than under closed economy growth path $y_a y'_a$. While the path y_a - y_b - H'_0 - H'_1 - y''_b describes the growth path of an economy with trade opened up at time t_0 and closed down at time t_{10}.

2.2.2.1: Demand and Supply Motored Models :

These types of models combine the leading features of both Demand-motored and Supply-motored models. This is done by R.E. Caves[26] in his "Export-led growth: the post-War Industrial setting." He tried to build up "export-led" growth model through knitting together the different elements of the export-led models of Beckerman[27] and Lamfalussy.[28]

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[26] op. cit.

[27] op. cit.

[28] op. cit.

Under Beckerman's demand-motored growth model, economic growth is initiated by some competitive advantages in international trade that causes the nation's share of world exports to rise. This leads to the expansion of the production of export goods at a rate not constrained by the growth rate of either the domestic or the international markets. This expansion of export goods production affects the rate of capital formation, resulting in higher growth rate of real income and labour productivity. "Productivity gains stem from high rates of capital formation because such technological change must be embodied in new plant and equipment."[29] Finally, it is assumed that this higher growth rate in real income either affects the balance of trade favourably or the unfavourable effect in balance of trade so small that no need arises to restore the balance of payments. In other words, the higher growth rate is self-sustaining till such time as the conditions favourable to export growth are sustained.

On the other hand, Lamfalussy's supply-motored growth model, while keeping the main elements of the Beckerman's model, adds two different elements. Firstly,

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[29]Caves, op.cit.

export growth not only affects the rate of capital formation as in Beckerman's model, but it also adds the "defensive investment"[30] in the economy. This leads to much higher rate of capital formation than envisaged in Beckerman's model. Secondly, increase in the rate of growth of income increases savings through (i) retention of a large share of the short-run increase in profit of the corporate sector; (ii) rise in tax revenues of the government not immediately matched by increased expenditure or affect by reduced tax rates. In other word, "Lamfalussy uses this non-linear relation of both saving and investment to the level of income, occasioned by export-led growth, to explain why induced increases in imports fail to spoil the game....
...... Export growth is asserted to raise (the supply) both saving and investment."[31]

With these structural elements from Beckerman and Lamfalussy models, Caves built his model by considering

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[30] 'Defensive investment' is the investment required to increase productivity of a capital equipment. For example, 'modern' machinery added in an old plant layout, raises total output less than when the same machine is added to a newer plant layout requiring same investment expenditure.

[31] Caves, op.cit.

exogenous increase in export and with the help of the following four basic equations :

(i) Investment Function: $I/Y = V\frac{X}{Y} + W$

(ii) Savings Function: $S = a\Delta Y + bY$

(iii) Import Function: $M/Y = m(\Delta Y/Y) - n$

(iv) Equilibrium Condition: $S = I + (X - M)$

Solving (i), (ii), (iii) and (iv) gives;

(v) $g = \dfrac{\Delta Y}{Y} = \dfrac{w - n - b}{a + m} + \dfrac{v + 1}{b + m} \cdot \dfrac{\Delta X}{Y}$

In the relation (v) determining g, the partial relation of $\Delta Y/Y$ to $\Delta X/Y$ is positive, but whether or not g is positive over all, depends on the saving and investment function (i) and (ii) above. As such, a growth path satisfying the equilibrium conditions need not be positive, and if positive need not involve an improving trade balance.

2.2.5: POLICY MODELS :

As stated earlier, policy models try to show how far foreign exchange resources can raise economic growth of an economy. In particular, R.I. Mckinnon's model[32]

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[32] op. cit.

tries to show at what propensity to export the foreign capital transfers in terms of aid or foreign investment become unnecessary for a given growth rate to be maintained.

To derive this, let us start with the position that growth at the desired rate may be constrained by lack of export capability rather than domestic savings. In this case the problem is to find out, what export capability is required to ensure that aid flows to supplement export earnings initially, will eventually fall to zero ?

Suppose only capital goods are imported but exports initially are inadequate to finance the required level of imported capital goods to achieve the desired growth rate. With the notations used in Chapter I (Page-3), we have:

Foreign Assistance (F_t) for growth rate $(r) = M_t - X_t$ .. (1)

Where, M_t = imported capital goods.

X_t = exports.

B - output/capital ratio of imported capital goods.

We have, $M_t = \frac{r}{B} Y_t$ ... ... (2)

and $X_t = X_0 + \overline{X} (Y_t - Y_0)$ ... ... (3)

Where, $\overline{X}$ = marginal propensity to export from
From (1) and (2) and (3), We have:

$$F_t = \frac{r}{B} Y_t - \left[X_o + \overline{X} (Y_t - Y_o) \right]$$

$$F_t = (\frac{r}{B} - \overline{X}) Y_t + \overline{X} (Y_o - X_o) \quad \ldots \quad \ldots \quad (4)$$

It will be clear from (4) that F will decline if

$\overline{X} > \frac{r}{B}$. In other words, in order to maintain growth

rate r without foreign capital transfer in terms of aid

or foreign investment the economy must maintain $\overline{X}$

as export propensity. Such that $\overline{X} > \frac{r}{B}$. The greater

the extent to which $\overline{X}$ exceeds $\frac{r}{B}$, the faster will self-

sustained growth be achieved and smaller the total aid

transfer required.[33]

2.2.4: HISTORICAL EXPERIENCE OF EXPORT-LED GROWTH:

As for the examples of export-led growth, Great

Britain is put forward as a prime example, "both in the

way that exports of first textiles and then iron and coal

stimulated the growth of Britain." Britain's growing

exports stimulated its imports from other countries. This

helped in spreading growth process. Britain also helped

in the process of development of France and West Europe

through technical assistance which was made possible because

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[33]Healey J.M. The Economics of Aid, London, Routladge
and Kagan Paul, 1971.

of growth in Britain. Professor ~~Nurkse~~ Nurkse also mentions

Argentina, Australia, Canada, New Zealand, South

Africa, U.S.A. and Uruguay as the successful examples

of 19th. century export-led growth. However, it is

argued that "of the seven countries mentioned by Nurkse,

the U.S.A. at least shows few signs of export-dominated

growth." Actually, it was due to "other conditions"

favourable in these countries, particularly in U.S.A.

and Australia, that there was successful economic

growth. By contrast, the growth in trade of underdeve-

loped countries was almost as much as that obtained

in the developed countries during the last quarter of

the 19th century and the pre-World War I in the 20th

century but there was no successful growth in quite a few

of them, for example, India and Ceylon. In such cases

trade did not serve as an engine of growth because

"other conditions" favourable to growth were absent.

These "other conditions" are discussed under "carry-over

problem" in section 2.6.

2.3: EXPORTS (or trade) AS A LAGGING SECTOR OF GROWTH :

It is now frequently held that export-led model was

in operation in pattern of 19th century development but

is no longer relevant to the 20th century, except perhaps

in oil. The exponents of this view points to the exi-
stence of certain unfavourable market conditions and
forces as the causes of lagging exports. And in the
absence of any domestic stimulation, trade can be a
serious constraint on growth. The explanation propo-
unded by Prebisch,[34] Myrdal,[35] Singer,[36] and to some
extent Nurkse[37] is probably the most widely known
analysis in this group. According to this group there
are systematic forces at work in modern world tending
to diminish the benefits from trade accruing to deve-
loping countries. The viewpoint is clearly opposite
to that of the classical, of the neo-classical and some
of the modern economists including Keynes.

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[34]Myrdal G., An International Economy, (New York:
Harper, 1956); and Rich Lands and Poor,(New York: 1957)

[35]Perbisch R., "Commercial Policy in Underdeveloped
Countries," American Economic Review, (May, 1959);
"Economic Development of Latin America," Bulletin for
Latin America, (February, 1963); "Towards a New Trade
Policy for Development", UNCTAD Document, E/conf. 46/3,
U.N. February 12, 1964.

[36]H.W. Singer, "The Distribution of Gains between
Investing and Borrowing Countries," American Economic
Review" (May, 1950).

[37]R. Nurkse, "Pattern of Trade and Development",
The Wicksell Lectures, Stockhom, 1956.

2.3.1: FRAMEWORK OF EXPORT-LAGGING MODEL :

The main arguments against the trade pattern pro-
duced by market forces is that the terms of trade of
underdeveloped countries have a long-run downward
tendency under the following influences: (i) In spite
of the technological progress exports of underdeveloped
countries are priced competitively while those of the
developed countries have monopolistic markets (Singer
argument).   (ii) During business cycles, underdeveloped
countries' terms of trade improve on the upswing and
decline on the downswing, but presumably decline each
time by more than the prior rise, so that the long-run
effect is downward.   This is explained by wage-price
flexibility at the "centre" and wage-price regidity at
the "periphery".   Some of the rising profits (in the
centre) in upswing are mopped up by higher wages but
in the downswing wages are rigid, so that prices of raw
materials are forced down more than the previous rise.
But greater price-wage rigidity at the periphery would
not alleviate the difficulty, it would, in fact, inten-
sify it.   (iii) Underdeveloped countries have higher
income and price elasticity of demand for imports than
those of the developed countries, so that to achieve
balance between imports and exports, the former countries
must reduce domestic wages and prices, accepting a

deterioration of their terms of trade (Myrdal argument).
(iv) Perbisch tries to arrange the products (expor-
tables) by comparing the "productivity ratio(which)
expresses the relationship of physical productivity per
man between the periphery and the centre" with the wage
ratio. There is, of course, only one wage ratio and
there are as many productivity ratios as there are
commodities. A commodity will be exported by the peri-
phery only if the productivity ratio is equal to or
greater than the wage ratio. In order for it to export
(or stop importing) a commodity for which the producti-
vity is less than the wage ratio, wages must fall.
However, Perbisch goes on to argue that the difference
in productivity between the "best" and the "marginal"
export good is transferred "to the centre though the
free play of market forces," obviously through deterio-
ration in terms of trade. Here, Perbisch believes that
there is a tendency for the periphery to have a greater
"productivity surplus" than the centre. This is clearly
what he means when he talks about "disparities in
technological densities". (v) The current pessimistic
trade theory was most systematically put forth by R.
Nurkse. According to him the large increase of exports
of the then developing countries of the 19th century were

mainly responsible for favourable demand conditions.

He states "the tremendous expnasion of Western Europe's

and, especially, Great Britain's demand .... for

foodstuffs and raw material" that favoured "the basic
inducement
~~inducementk~~that cause them (especially U.S.A., Canada,

and Australia) to develop." He feels that in 20th

century such favourable demand conditions from the

world's industrial centres do not exist owing to such

factors as (a) change in the structure of production in

favour of industries requiring low raw material content

of finished goods; (b) low income elasticity of demand

for agricultural materials; (c) economies in the use

of raw materials; (d) development of synthetic substi-

tutes; and (e) agricultural protection.

Of all the pessimists, it was R. Perbisch who force-

fully represented the terms of trade school, as the

Secretary General of UNCTAD. His policy views as expre-

ssed in his report to UNCTAD$ were based on his views

regarding trade as an agent of growth. His theoretical

groundwork is more ably constructed in his three rela-

tively recent expositions. The most significant point

made by Perbisch is that the mechanism he describes

inexorably reduce export earnings of underdeveloped coun-

tries below the levels they would reach if the structure

of world trade were different. Moreover, according to

him remedy does not lie in industrialization through
import substitution alone since it has already gone
too far in many countries raising costs unduly, but in
trade liberalization by developed countries for commo-
dities of the developing countries so as to balance
their external trade.

These policy proposals designed to create balance
based on the Perbisch - Singer - Myrdal terms of trade
argument according to which this balance cannot be esta-
blishied by free play of market forces, is now considered
as received doctrine by the less developed countries and
has especially been formalized in the Final Act of
UNCTAD. However, here we may note the counter arguments
against the terms of trade school. These are: (i) In
estimating what has happened to terms of trade, every-
thing depends on choice of a base year, and on the choice
of a particular definition of terms of trade. (ii) The
deterioration in the terms of trade may be more than
counter-balanced by growth in the volume of trade leading
to decrease in real costs of exports of these commodities
made possible through introduction of better techniques
in the export sector and economies of large-scale produ-
ction, which, in turn, were due to international trade
itself.[38] (iii) If wages are rigid in the centre and

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[38]Viner, _International Trade and Economic Development_,
(Oxford: The Clarendon Press, 1953)

flexible in the periphery, it should be possible for the periphery to compete increasingly on a price basis in the markets where both centre and periphery trade or to enter the market where centre was the sole supplier. Further, if centre places barriers to entery in its market, increased real wages in the centre means that it is less competitive with the periphery in periphery markets.[39] (iv) To determine gains from trade by comparing wage ratio with productivity ratio is to treat labour as the sole factor of production, so that its conclusions about changing cost relationships apply only to a part of the total costs. Prebisch comment that land rental is excluded "to avoid complications ..... since it cannot be transferred" is analogous to "simplifying" a study of oligopoly by assuming that there is only one firm.[40] (v) Prebisch does not explain why there is downward pressure on wages in less developed countries, which accounts for the decline in terms of trade, could not be offset by diverting labour into other sectors that need no protection. (vi) Prebisch rejects devaluation or export subsidy as possible alternatives to tackle the

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[39]M.J. Flonders, "Prebisch on Protection," _Economic Journal_, No.294, (June, 1964), pp. 305-326.

[40]M.J. Flonders, op.cit.

situation on the ground that it would result in a higher
level of less developed country export than is desirable
from the welfare point of view. It is because of this
that in the UNCTAD report, he favoured trade preferences
as a method of encouraging LDC manufacture. However,
this part of the analysis is difficult to follow and
least convincing. (vii) Against the 'demand-deficiency'
argument of Professor Nurkse, there are many who argue
that the growing lag in exports of the present-day under-
developed countries is attributable to industrialization
in these countries involving greater consumptions of
their own agricultural materials, thus restricting the
supply for the export market. This is reflected in increa-
se in their export prices. The export prices from the
non-industrial countries have, in fact, risen since pre-
war by half as much again as the prices obtained by indu-
strial countries for their exports of primary produce.
This sharp rise in prices of exports from non-industrial
countries, Professor Carincross[41] argues, "reflected
the acute pressure on supplies of primary produce in a

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[41]A.K. Carincross, "International Trade and Economic
Development," Kylalos, Vol. 13, 1960.

fully employed economy - a pressure that continued because of the low supply elasticity of this produce."
Professor Carincross further argues that this low elasticity was "aggravated by the concentration of effort in many underdeveloped countries on industrialization rather than agricultural development."

What emerges from the 'terms of trade' controversy is not yet clear. But it may be pointed out that Prebisch - Myrdal - Singer view is now generally an accepted doctrine in underdeveloped countries and therefore it is generally believed in these countries that since exports grow but slowly and prospects of capital borrowing are rather dim or expensive, the only way towards industrilization is through import substitution and cutting down imports of consumer's goods in favour of machinery and raw materials to help the process of import substitution. With this belief many developing countries are following a conscious policy of development through import substitution or what is called inward-oriented development programmes. We have already examined the relative merits of import substitution in India and hence only quote Professor Kindleberger's words: "If domestic entrepreneurs are sluggish and timid about applying new techniques or devising them, it may just be that increased imports will help by shaking them up. The

competitive aspect of imports can be important, and, where it is, import substitution is exactly the wrong medicine."[42] In fact, in recent years, as the limits of import substitution have become more obvious, the underdeveloped countries/started shifting their emphasis

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on the external factors that are supposed to limit the ability of these countries to increase their export earnings.

2.4: EXPORT (or trade) AS A BALANCING SECTOR OF GROWTH :

Under export-leading model, exports stimulate growth under certain favourable circumstances at home and abroad. While in export-lagging model, it can inhibit growth when either of the circumstances are unfavourable. But when exports neither had lead nor lag, it may act as a balancing sector of growth. Leading propounders of this exports-balancing model are Professor Hicks,[43] Professor Nurkse,[44] and G. Rannis[45] who/supported their views

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[42]C.P. Kindleberger, "Foreign Trade and the National Economy, (Yale University Press, 1964), p.210.

[43]J.R. Hicks, Essays in World Economics, (Oxford,1959)

[44]R. Nurkse, Pattern of Trade & Development, (Stockholm, 1959).

[45]G. Rannis, "Trade, Aid and What?" Kyklos, Vol.16, 1963.

through British experience and that of Japan during
their development process, before 1857.

2.4.1: THE EXPORT-BALANCING MODEL :

This model is an off-shot of the balanced growth
and unbalanced/doctrines. According to the balanced
growth theory, the process of growth involves a number
of balancing problems. Foreign sector can assist in
their solution. Foreign market relieves a developing
country from the necessity to seek balance in the
sense of filling the gap between production and consu-
mption. For example, an economy improves its agricul-
tural production, through improving efficiency, not only
to satisfy domestic demand but also for exports of agri-
cultural products in order to pay for import of capital
equipments and industrial inputs or export manufactures
to pay for imported agricultural materials. Viewed in
this way foreign trade may act as a 'balancing sector'.

Alternatively, Professor Hicks suggested that un-
balanced growth doctrine lays great stress on increa-
sing returns (because of its economies of large-scale)
since it has close connection with capital accumulation.
Capital accumulation makes it possible to employ advanced

techniques but are profitable (in the sense of lowering costs and hence of raising national productivity and therefore national income) if they can be employed on a large-scale. But such a scale requires large market to absorb this large output. This is provided by foreign trade in the presence of small market of under-developed countries which are characterised by low real income. Further, the demand for 'advanced' capital goods are also quite moderate, small and intermittent and as such it is more advisable if they are imported from abroad than be produced internally. It is in this way that "the developing economy should treat trade not as an engine of growth but as an additional efficient machine of production at its disposal for securing the goods required with exports as inputs and imports as out-put."[46]

2.4.2: HISTORICAL EXPERIENCES OF EXPORT-BALANCING MODEL :

History is full of examples of 'trade as a balancing' sector. In Japan, for example, export was not a leading sector, it only has acted as a balancing sector of the growth. Prof. Lakdawala has observed that the

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[46]G. Rannis, op.cit.

exports of silk made it possible for Japan to industri-
alise by providing the necessary foreign exchange. On
the other hand, W.A. Lewis has stated that Britain has
exported manufactures in order to balance its output.
He has also stated that after 1875, Britain's, the rate
of growth of exports decreased from 6 % a year to 2 %,
thus, it failed to keep pace with its imports. However,
in order to keep balance, the rate of industrilization
was kept down at the rate at which exports could pro-
vided the appropriate balance. In more recent times
most countries including Great Britain and U.S.A. on the
one hand and India on the other, treated foreign trade
as merely a balancing sector of their economies. We
must remember the central point in this regards; almost
every country needs at least some exports to pay for the
imports she must have.

2.5: CARRY-OVER PROBLEM :

In order to search for these "other conditions"
let us address ourselves to more relevant questions :
Why does the expansion of exports stimulate growth in
some countries while it fails to do so in others ? Why
the gains from trade have not led on to more substantial
gains from growth in some countries ? The answer is:

While the expanding exports directly affect the foreign
trade sector of the economy, they failed to "carry-
over", as Meier[47] puts it, the growth profess to other
sectors of the domestic economy through its indirect
effects. This failure to "carry-over" has been accounted
for differently by different writers: (1) There are
some who believe that trade is responsible for the
"demonstration effect" in underdeveloped countries, raising
the propensity to consume and thus reducing the saving
rates, the prime motive force of the development process;
(2) The more serious is the argument that international
market forces of transfer of income from underdeveloped
to developed countries through secular deterioration in
terms of trade of the former; (3) There are some who
argue that the growth of the export sector through foreign
investment has created "dual economy" withing the under-
developed countries. The leading characteristics of
which is that the foreign sector remains isolated from
the other sectors: (4) There are many who argue that
such factors like (a) the nature of production function of
the export goods; (b) market conditions; (c) socio-
cultural conditions within the economy: (5) Finally,

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[47]G.M. Meier, _Leading Issues in Development Economics_,
(First edition, Oxford University Press, 1964).

it is believed that there are severe fluctuations in export earnings of the underdeveloped countries and these fluctuations inflict serious damage upon the growth of these countries. We have already dealt with the first two of the above five arguments based on allegedly unfavourable aspects of international trade earlier and hence we shall presently deal with the last three arguments in greater detail.

2.5.1: THE THEORY OF "DUALISM" :

It is argued that if the export sector does not lead or lag or balance, it may form a separate sector of an economy. This is the theory of "dualism". One of the most direct exponents of this theory is J.E. Bocke[48] who has based much of his analysis upon Dutch experience in Indonesia.

Under this "dualistic" theory, most of the under-developed countries - especially African and South - East Asian countries - consist of two parts - an advanced or modern sector and a backward or traditional sector.

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[48]J.E. Bocke, Economies and Economic Policy for Dual Society, (New York: Institute of Pacific Relations, 1963).

The modern sector of such economies came into existence
with the development of important relation with advanced
countries whether through international trade or through
the establishment of modern 'enclave' in an otherwise
backward and economic setting. Under such 'dualistic'
conditions, it is argued, neither economic theory appli-
cable to advanced economy nor those of pure backward
or traditional economy are directly applicable but such
'dual economy' shall require a separate theory, called
"dualistic", which is a theory of interactions of these
two theories. This is because of the fact that such
dual economies exhibit many distinctive characteristics
of their own, e.g. dual social and economic organizations,
dual factor endowment, dual technology etc. The
advanced sector is endowed with plantation, other
commercialised agriculture, mines, o/ilfields or refi-
neries and large-scale industries which produce for
exports, while the backward sector is dominated by agri-
culture, handicrafts and small-scale industries produ-
cing for local market. It is in this way that foreign
sector supplements the advanced sector but remains insu-
lated from the backward sector. Further, under the condi-
tions of technological dualism, an expansion in exports may
induce investment and further technological progress in

the advanced sector, but it would be ineffective in
reducing the chronic unemployment or stimulating
investment in the backward sector. Further, the back-
ward sector would happen to be in an unfavourable
position because either as consumers or producers, it
would be faced with monopoly and monoposany conditions
in developed sector dominated by foreign-owned enter-
prises and foreign trading firms. Moreover, the multi-
plier effect of foreign investment is lost due to
income leakages abroad in terms of profits and interests
to the capital - exporting countries. Finally, it is
argued that the immigration of unskilled labour into
backward countries has made the dualistic character of
the economies more pronounced as it helped to keep wage
rate at low level in the sector, dampening further the
prospects of employment of labour from backward sector.

A Critique of "Dualism" :

However, it is argued that while the dualistictheory
of Bocke may have fitted well with experiences of some
of the 19th century and even the 20th century under-
developed countries, there is no reason to believe such
a strict long-run isolation of domestic sector with the
advanced sector and hence with the foreign sector will

ensue in other cases as well. No doubt, some degree of dualism exists in virtually every economy. Even the most advanced countries like Canada and U.S.A. can be divided into distinct regions with distinct qualities with respect to technology. It seems, "Dr Bocke exaggerates the degree of "dualism" in such countries as Indonesia; the contrast between the advanced and under-developed sectors appears to me to be less sharp than Bocke contends, and to be diminishing. Nor can I see that such dualism is specifically eastern."[49]

2.5.2: THE NATURE OF PRODUCTION FUNCTION OF EXPORT GOODS :

The growth of the export sector, while primarily increasing the production for exports, propagates secondary changes in other sectors through its "backward linkage" and "forward linkage" effects, the intensity of which depend on the nature of exports' goods produ-ction function. Different export goods require different proportion of various inputs and as such have different

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[49]B. Higgins, "The Dualistic Theory of Underdeveloped Areas," Economic Development and Cultural Change, January, 1956.

"backward linkage" effects. Thus, when some exports grow, they stimulate the expansion of input-supplying industries in the economy. While for other exports, the input proportion is such as to provide little stimulus to growth of input-supplying industries. Further, the use of different factor proportions in different export goods will affect the distribution of income, producing differential impact on growth through consumption and saving propensities. Moreoever, export sector may provide organizational, administrative and labour skills to other sectors, depending upon whether export sector is dominated by local or foreign entrepreneurs. On the other hand, different export goods use different types of technical processes and thus have different "forward linkage" effects. Thus the mechanical processing, as against traditional processing through human labour, of raw materials or inter-mediate goods of exports stimulate employment and create income in other activities supplying materials, intermediate goods, tools and equipments, transportation and construction. The larger the degree to which the exports are processed, the larger will be such stimulation to the domestic sector through spread of technical knowledge, labour organizational and administrative skills. It also provides scope for innovations in the export sector

itself. Moreover, different export goods have different
degree of export fluctuations, and, in turn, different
degree of instability in export earnings, producing
greater or smaller impact on employment, real income,
capital formation, resources allocation and the capacity
to import affecting the growth of the economy.

Here mention must be made of the pioneearing empi-
rical work of a Canadian economic historian Horld
Innis[50] who propounded a "staple theory" of Canadian
economic growth and later on clearly presented by North,[51]
focussing attention on the differential roles of staples,
such as fish, fur, timber, grain, and mineral owing to
their different physical characteristics. While fish
and fur were poor commodities for growth, timber, grain
and minerals had positive effects on Canadian economic
growth. While fish requires special sunny conditions
td dry up, fur requires large amount of land as input.
On the other hand, timber and wheat exports encouraged
immigration because of cheap backhaul rates. In addition
they also encouraged railroad construction, auxiliary
industry like farm machinery, smelting, refini/ng and
fabricating. More recently, R.E. Caves[52] has also
claimed that export of staples, particularly, wheat

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[51]D.C. North, "Location Theory and Regional Economic
Growth", _Journal of Political Economy_, June, 1955.

[52]R.E. Caves, "Export-led Growth and the new Economic
History," _Trade, Balance of Payments and Growth_, J. Bhag-
wati and others, editors, (North Holland, 1971).

explains the growth of Canadian economy. He remarked:
"the export-led or staple growth model emerged from
research in Canadian economic history primarily to
explain variations in the growth of aggregate economic
activity, including factor inflows in relation to swings
in the exports of staple products."[53]

2.5.3: MARKET AND SOCIO-CULTURAL CONDITIONS :

In short, "the stimulus from exports will differ
among countries according to the nature of their
export-base." Moreover, this stimulus from exports
depends on how much receptive the other sectors are which
will be evident if we look to "market" and "other socio-
cultural" conditions within the domestic economy. Since
the existence of formidable domestic obstacles in the
transmission of the gains from exports to other sectors
may have only weak penetrative power. One such obstacle
is the market imperfections prevailing in majority of
the less developed countries "characterized by factor
immobility, price rigidity, restrictive tendencies in
both the factor and good markets, ignorance of technological
possibilities, limited knowledge of market conditions
and limited entrepreneurial talents. All these imper-
fections handicap the achievement of inter-temporal

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[53]Caves. op.cit.

efficiency in the utilization of resources."[54] Moreover, many of these inhibiting factors are a function of political and socio-cultural development necessary for a "take-off into self-sustained growth" to use the famous Rostowian terminology. These political and socio-cultural development influence society's capacity to transform itself through such factors as attitudes towards work and reward adaptation to the changed technology and economic conditions etc.

To sum up, if more extensive "carry over" from export sector to domestic sector is to be achieved, the economy must adopt stimulating export-base on the one hand and the various domestic barriers towards absorbing these stimulation must be removed on the other.

2.5.4: EXPORT FLUCTUATIONS AND ECONOMIC DEVELOPMENT:

Coming to the export fluctuations and economic development, the following are some of the ways in which the former is supposed to affect adversely the latter :
(i) If agricultural production constitutes the major portion of exports, the fluctuations in export earnings cause uncertainty and hardship to the farmers, distorting the internal allocation of resources away from the

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[54]G.M. Maier, op.cit.

optimum;. (ii) uncertainty, caused by export fluctuations,
may affect investment by other groups in the economy and
by the government through first, increasing the difficulty
of estimating the expected returns on an investment, and
second, increasing the uncertainty of ability to import
the necessary capital goods or raw materials at a given
time, and third, the existence of these uncertainty may
wtake the suppliers of capital and credit charge higher
rates of interest and impose more stringent conditions
which may add to the difficulties of invewtment; (iii) If
fluctuations in exports and national income are in the same
direction, parallel changes in domestic savings may also
occur. And if marginal propensity to save is larger than
the average propensity to save which is generally the
case in underdeveloped countries, the domestic savings
available for investment will fluctuate more than pro-
portionately to fluctuations in income. Such instability
of savings and investment could be expected to lower the
efficiency of investment; (iv) export fluctuations, in
the absence of any effective cushion like adeuqate foreign
exchange reserves, IMF drawing rights, may tend to produce
temporary bottlenecks in the flow of foreign exchange,
resulting tin turn, in a cut in capital-goods and raw
material imports. This makes the development programmes
of the countries concerned more sensitive to changes in
ability to pay for imports.

2.6: SUMMARY AND CONCLUSIONS :

Theoretically, it is believed that the gains from trade can be merged with the gains from growth under certain circumstances, while they may diverge under different conditions. In between these two extreme cases, many other cases of trade-development relationship fall. These are covered under three broad models groups of models of the dynamic approach to trade-development relationship by Prof. Kindlegerger. They are :

(i) Trade (or exports) as a leading sector of growth;

(ii) Trade (or exports) as a lagging sector of growth;

(iii) Trade (or exports) as a balancing sector of growth.

Prof. Meier, on the other hand, has tried to explain as to why the growth in exports in some countries has not "carried over" to other sectors and lead to more widespread development in the demestic economy.

The leading exponents of "export lead" model are Prof. Haberler, Prof. D.H. Robertson, Sir Cairncross, Cordeon, Prof. Kindleberger to give a few representative names of the school. They have based their hypothesis on the historical experiences of many countries, notably Great Britain, Argentina, Australia, Canada, New Zealand, U.S.A. According to them export can be a leading sector

of an economy through its various direct and indirect impacts on the domestic economy. They are :

(A) **Direct impacts of exports** :- The following are the direct impacts of exports :-

(1) **Increase in income** :

When the resources are fully employed, an increase in foreign demand for goods increases income through raising their prices or through ꞙꞦꞣꞧꞩꞽꞣꞧ inducing investment and innovations which make it possible to produce more goods at lower cost at home. The resulting increased income will lead to further increases in income through increases in savings, investment and output.

(2) **Increase in employment** :

On the other hand when the resources of an economy are either unemployed or underemployed, an increase in exports provide employment opportunities to the unemployed or underemployed resources.

(3) **Increase in efficiency** :

Development of exports tend to concentrate country's scarce resources in most efficient sector in which the country enjoys a comparative advantage, leading to specialization in production. This helps to increase

the efficiency of the resources. This is a major impact of trade in the process of growth of an economy.

Moreover, in order to retain foreign markets, the prices of the export goods must remain highly competitive. This acts as a pressure on export industries to keep costs as low as possible which, in turn, force the industries to search for more efficient operations. This is the gain to the economy. The competitiveness in the foreign market also acts as a force towards improvement in quality of the export goods. In order to increase productive efficiency and to improve quality, the export sector has to improve technology and methods of production.

(4)   Economies of large-scale production :

In under-developed countries, it is quite possible that some of its industries are operating at a level too small to be efficient. The large-scale production may not be possible within the limitations of domestic market. Foreign market along with domestic market, obviously permits large-scale production, leading to economies of scale in production that would reduce the unit cost of production.

(B) Indirect impact of exports on an economy: In addition to these direct impacts of exports on economy, the

following are the indirect impacts:

(5) Inducement to domestic and foreign investment:

Development of export industries, stimulate additional domestic investment in both existing and new processing and ancillary industries to supply and service the operations of the main export industry. Prof. Hirschman has pointed out that increase in exports may call attention to investment opportunities, and guide entrepreneurs and investible capital to possible ventures that may never have occurred otherwise. Profitable export industry also serves as an inducement to foreign investors in the country.

(6) Exports, the most efficient means of developmental imports :

In the initial stages of development, developing economy requires large-scale imports of foreign machinery equipments and technical know-how in which it is obviously lacking. These imports have to be paid for in terms of foreign currency. This can be done either by way of foreign loans or grants or foreign investment or through exports. There is no denying the fact that exports are economically the best means of financing imports for the following reasons :

Firstly, when the imports are financed by exports, the country has the reasonable freedom to buy its

needed foreign goods in the market of its choice and at competitive prices. On the other hand, imports financed by foreign loans or grants have generally some restrictive terms and often the country has no choice but to purchase the imports in the lender's market at a price dictated by the sellers who may take undue advantage of the buyer's restricted choice.

Secondly, when imports are financed by exports, the usual foreign trade multiplier of income propagation operates in the domestic economy itself, thus giving impetus, to the economy as a whole. On the other hand, when imports are financed by foreign aid or grants, the multiplier operates in the lender's economy at the cost of the borrowing economy.

Thirdly, foreign loans carry interest and the principal has to be paid of at some future date, while foreign participation in the domestic activity involves remittence of profits and external repartiation of capital. This means a great burden to the country concerned. All this means that genuine foreign exchange for development imports may be better had only through increased exports.

Obviously, therefore, if a country could increase

its exports, it could also increase its developmental imports most economically. Increasing export earnings is not an end in itself, rather it is a means "for providing the most important wherewithal to purchase imports necessary for development." It is the way in which this export earnings is being used that determines the course of future development of the economy." .....
the existence of these new domestic export proceeds has presented many export economies with fresh source of funds with which to further future growth. The strategic use of these new funds can add to a broad domestic development efforts the impetus needed to set off cumulative growth."[55]

As against this "export-lead" model, there are some authors like Gunner Myrdal, Raul Perbisch, Singer and others who have developed "export-lagging" model of export-growth relationship. According to their views, under the present international market conditions, there are limited possibilities for the exports of the developing countries to grow. And even if they grow, it would contribute international inequality through continuous deterioration in terms of trade of the developing countries. As such, the export sector cannot become a leading sector, but it may be a lagging sector, that which retards the process of growth- of the present day developing countries.

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[55]J.V. Lavin: The Export Economies, Their Pattern of development in historical perspective, (Harvard University Press, Cambridge, Mass-1960)

But there are others like Viner, Flonders and Carincross who have argued against the views of "export-lagging" school. However, it may be pointed out that the views of this school are now generally an accepted doctrine by underdeveloped countries and therefore it is generally believed in these countries that since exports grow but slowly and the prospects of capital borrowing is rather dim or expensive, the only way towards indu- strilization is through import substitution and cutting down imports of consumer's goods in favour of machinery and raw materials to help the process of industrilization. But, in recent years, as the limits of imports substi- tution have become more obvious, the developing countries have started shifting their emphasis on the external factors that are supposed to limit the ability of these countries to increase their export earnings.

In short, under "export-leading" model, exports stimulate growth under certain favourable circumstances at home and abroad. While under "export-lagging" model, it can inhibit growth where either of the circumstances are unfavourable. In between these two extreme models of trade-growth relationship, there is an "export-balancing" model supported by a few economists like Prof. Hicks, Prof. Nurkse, G. Ranis who have adopted a neutral

position. This model is an off-shot of the balanced
and unbalanced growth doctrines. According to them,
if export sedtor can neither become a leading sextor
nor lagging sector of growth, it may play, in the
changed international conditions, a marginal role of
balancing sector between consumption and production
and between other domestic sector. They have based their
model on the historical experiences of Japan and Britain
before
~~after~~ 1875.

All in all, the above three models of the dynamic
trade theory have suggested their export-growth relation-
ship under certain conditions. For example, "export-
leading" model has suggested that exports stimulate growth
under certain favourable conditions at home and abroad.
But what are these conditions ? In order to search for
these"conditions" G.M. Meier has addressed himself
with more relevant question: Why expansion of exports
stimulates growth in some countries while it failed to
do so in others? The answer to his problem has been
provided by Meier who has suggested that the extent to
which trade stimulates growth depends on the "excarry-
over" from foreign sector to the domestic sectors of the
economy. While the expanding exports directly affect
the foreign sector of the economy, it may failed to "carry-
over the growth process to the other sectors of the

domestic economy. Therefore, if more extensive "carry-
over" from the export sector to the domestic sector
is to be achieved, the economy must adopt a stimulating
export base on the one hand and the various domestic
socio-cultural barriers towards absorbing these stimula-
tion from exports must be removed on the other.

In brief, theoretically and historically, the
pendulum of trade-development relationship swings on
both the sides. Trade can stimulate growth under certain
conditions while it can/inhibit it under different
conditions. Hence one can rightly say "trade is one
among many factors affecting growth, and that it is
unlikely to be dominant variable in many instances .....
.... The term "engine of growth" is not generally descriptive ans
and involves expectations which cannot be fulfilled by
trade alone; the term "handmaiden of growth" better
conveys the notion of the role that trade can play. One
of the most important parts of this handmaiden role for
today's developing countries may be to serve as a check
on the appropriateness of new industries by keeping the
price and cost structures in touch with external prices
and costs,"[56] It can also play the marginal role of
balancing between consumption and production and between
sectors.

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[58]I.B. Karvis. "Trade as a Handmade of Growth",
Economic Journal, December, 1970.