Chapter VIII

APPROACH TO REGIONAL PLANNING
The Problem Stated

After partition, the location of the expanding industrial capacity in the two wings took place in an unplanned manner. The private sector preferred either those sites where the owners lived or where, such as Karachi and Lahore, a number of industries had already been established and the new industries hoped to enjoy certain economic advantages. As regards the government sponsored plants, apart from economic considerations, social and political considerations led to the establishment of certain plants at uneconomic locations resulting in isolated mills at places like Quetta, Harma, Bannu, Lawrencepur, Haripur etc. Some of them did make "profits" but only with the help of government subsidy in one form or another. (1)

A number of ad hoc instructions regarding industrial location were issued by the government aiming primarily at preventing further concentration of factories in Karachi and Lahore and dispersing new industries over the country. But in spite of this, Karachi continued to expand at a rapid pace, partly because the pre-conditions of growth had already been created there and partly

because some of the policies of the government aided this concentration. (2)

The establishment of industries therefore proceeded without any regard to the problem of regional development till the coming up of the First Plan in 1955. The First Plan proposed balanced regional growth and roughly equal expenditure for East and West Pakistan - the allocation for the development of industries and agriculture being greater for East Pakistan. Also a substantial amount was allocated for the development of social overhead capital. Though information is sparse, it is estimated that the short-fall in financial implementation of the public sector development programme occurred primarily in East Pakistan, while in West Pakistan actual development expenditure either equalled or somewhat exceeded the Plan provisions. (3) Full implementation of the Plan in East Pakistan was retarded by a number of factors including political instability, serious shortages of technical skills, deficiencies in administrative set-up etc.

The problem was realised, but was not examined in any detail during the First Plan. Allocation of an equal amount of resources, equal per capita income or even the achievement of equal rates of growth in the two regions may satisfy the political consensus in the country but such a rough and ready solution may not satisfy the economic criteria. An 'economic consideration' of the problem would require a detailed examination of regions and the problem of the

(2) Ibid., 3 and The First Five Year Plan 1955-60, Government of Pakistan (Karachi, 1957) 414. Henceforth referred to as FFYP.

location of economic activity which was not done in the First Plan. Pakistan's indifference to the problem of regional development from the viewpoint of developmental planning is very much in line with the existing theory of planning which has so far failed to integrate into itself the very vital problem of regional development.

Though the 'Report of the Panel of Economists on Second Five Year Plan' recommended that the development of the two regions should be complementary to each other and a better regional balance should be established, (4) the Second Plan came forward with a more realistic approach to the problem, since it was realized that it was not possible to develop the two regions simultaneously and in a balanced manner. (5) In the Second Plan (Revised Estimates) a greater outlay was planned for West Pakistan on the whole as well as for agriculture, whereas a larger outlay was allocated to industries for East Pakistan. Social overhead capital allocation was lower for East Pakistan being 421.8 crores compared to Rs. 564.4 crores in West Pakistan. Under industries East Pakistan was to lay more emphasis on consumer's goods industries and West Pakistan on producer's goods industries. This was more or less in accordance with the factor endowment of the two regions. Though the problem of regional development as between East and West Pakistan was realized as being of great importance, yet there was hardly an effort made in the Plans to develop a systematic model

of regional development laying down a positive, consistent industrial location strategy. The First Plan aimed at balanced regional development whereas in the Second Plan the emphasis shifted on to the maximization of development in the less developed areas of the country especially East Pakistan. The matter is too important to be dealt with in this unco-ordinated, piecemeal basis. For framing a regional development pattern, not only should the political factors be taken into consideration but also the social and economic factors inherent in a sound regional development policy. Political expediency and stability are undoubtedly important but, for maximizing economic development overwhelming importance has to go to the economic factors.

The Alternatives Examined

Pakistan can have three solutions to its problem of regional development. The first solution is to give to its two regions a pattern whereby East Pakistan should develop as a satellitic region, predominantly agricultural, and West Pakistan being the region with the seat of the government and with a superior factor endowment, as the dominant region. Such a solution may undoubtedly give the highest degree of complementarity between the two regions but first it will keep East Pakistan where it is i.e. under-developed like all the satellitic countries, which would be against all the economic criteria and second such a solution will not satisfy the criterion of political expediency which without doubt is one of the most important factors particularly in view of the fact that East Pakistan has an absolute majority of population in the country.
Another solution may be to develop the country as an integrated whole under a programme of balanced regional growth, whereby both the regions should develop industrially as well as agriculturally. Such a pattern requires a common model of development for both the regions.

Every pattern of development when introduced, calls for certain adjustments in the economy by way of movement of the factors of production from one region to another, occupational changes, changes in the consumption pattern etc. unless, of course, the pattern is based upon a static view of factor endowment and trade. But the two are essentially dynamic; a change in factor endowment being a function of the pattern of trade and the pattern of development envisaged. In short, the two act and react upon each other as development proceeds and the adjustments in the economy referred to above are essential. These adjustments should work themselves out fully either automatically or with the help of the planning authority, depending upon the organization for development which a particular country has. If the required adjustments do not come about, there is a danger of certain mal-adjustments appearing in the economy—maladjustments taking the shape of unemployment, general or in certain lines only; excess capacity or shortages etc. In Pakistan if the two wings are developed as a single unit sharing the same pattern of development, the necessary adjustments may not take place because of the lack of mobility of factors and to some extent of goods, between the two regions, resulting in maladjustments. Moreover, if the two regions are developed as a compact whole, after some time, because of the
structural differences, East Pakistan may relapse into the role of a dependency of West Pakistan.

The third solution is to develop the two wings broadly independent of each other as two self contained units, each wing having its own pattern of development based upon its resource structure and trade. Separate patterns of resource allocation can be applied to the two wings either with extensive trade relations between themselves or each wing having its own trade relations with its neighbouring countries. The former will once again convert East Pakistan into a dependency. To venture a bold generalization, one may say, that whenever two regions, with the structural differences and disparities in the level of economic development (existing as they are between East and West Pakistan) will come in close contact with each other the inevitable tendency will be for the less developed region (East Pakistan) to become a dependency of the more developed region (West Pakistan) since the former would normally depend to a much greater extent on imports from the latter than vice versa (Table 33).

But for the year 1951 and 1952 there is a regular upward trend in the imports of East Pakistan from West Pakistan. Though such a trend is visible in the imports of West Pakistan also, the overall dependence of East Pakistan on West Pakistan is much greater. During these years, roughly 9% of East Pakistan's total exports went to West Pakistan while 20% of West Pakistan's total exports went to East Pakistan. Altogether during the seven years 1948-49 to 1954-55 West Pakistan exported to East Pakistan goods
Table 33
Coastal Trade: Imports into East & West Pakistan through Chittagong-Chalna & Karachi

(Millions of Rs.)

<table>
<thead>
<tr>
<th>Year</th>
<th>Karachi</th>
<th>Chittagong-Chalna</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>8.9</td>
<td>75.6</td>
</tr>
<tr>
<td>1949</td>
<td>40.0</td>
<td>187.5</td>
</tr>
<tr>
<td>1950</td>
<td>39.0</td>
<td>241.4</td>
</tr>
<tr>
<td>1951</td>
<td>35.0</td>
<td>164.8</td>
</tr>
<tr>
<td>1952</td>
<td>61.8</td>
<td>146.7</td>
</tr>
<tr>
<td>1953</td>
<td>134.3</td>
<td>290.6</td>
</tr>
<tr>
<td>1954</td>
<td>164.0</td>
<td>315.5</td>
</tr>
</tbody>
</table>

(a) Data for private account only.

Source: Statistical Bulletin, August 1957, Table 16, p. 928.

worth Rs. 181.2 crores and she took from East Pakistan goods worth Rs. 69.0 crores, generating a balance of trade in favour of West Pakistan of the order of Rs. 112.2 crores. (6) Either this deficit can be allowed to accumulate or payments may be made to West Pakistan in foreign currency but both the solutions are bound to turn East Pakistan into a dependency of West Pakistan. (7) Moreover in the case of extensive trade relations between the two wings the transport costs may be well nigh prohibitive.

But if the two wings develop independently with independent trade relations no such problems are likely to arise. The two regions can have their own patterns of development suited to their resources and trade relations. The two regions East and West

(6) R. Ahmed, "Interzonal Trade in Pakistan," Pakistan Economic Journal (Dacca) March 1957. The products of East Pakistan are exported mainly to foreign countries (e.g. jute, tea etc.) and hence this discrepancy in mutual exports as between the two wings.

(7) Ibid. In fact there have been net transfers of foreign currency from East to West Pakistan. It is sometimes claimed that this is just a payment made by East Pakistan for some of the central services and imports.
Pakistan will have their independent trade relations in the sense that goods will be imported to East Pakistan from the most economical sources from the viewpoint of East Pakistan i.e. from the South East Asian and Far Eastern countries and similarly for West Pakistan from the most economical sources from the viewpoint of West Pakistan i.e. West Asian and European countries. But as regards the balancing of payments, it will have to be done jointly for both the regions. Though the two regions will develop independently as self-contained units, following different patterns of development, yet it does not rule out all trade as between the two regions. A minimum amount of trade between the two regions is essential and will take place.

**A Suggested Solution**

The first solution can be ruled out as absurd without much deliberation because it is just not possible in modern times to keep one of the two regions down with agriculture only and industrialize the other. The actual problem of choice is posed by the second and third solutions. The First Plan approach, as has been mentioned, comes very close to the second solution. But the Second Plan approach is different in that it focusses attention on maximizing the development in the two regions. Such a statement is absolutely inadequate since it does not tell us anything about the policy, as regards regional development, through which development in the two regions is to be maximized.

The various factors influencing the location of economic activity in different regions can be divided into three groups.
These groups overlap to a certain extent and cannot be delineated very precisely but all the same an examination of the two solutions in the light of these factors can be quite fruitful.

1. In the first group may be included transport costs and certain other transfer costs. (8) The distinguishing feature of these costs is that there is a positive correlation between these and the distance variable. Deglomeration forces, including the law of diminishing returns, and the inequality of resource endowment as between the different regions force an economy into a complex of spatial relationships. Some of these relations can be expressed in terms of a simple concept of transport inputs. Transport inputs may be defined as the movement of a unit of weight over a unit of distance. (9) In other words, transport inputs amount to the factors needed to overcome the space resistance. In a space economy we wish to minimize these, ceteris paribus.

Transport rate is the price of the transport inputs. Lower transport rates will have a scale and a substitution effect since they will tend to (i) transform a scattered, ubiquitous pattern of production into an increasingly concentrated one and (ii) to effect a progressive differentiation and selection between superior and inferior resources and trade routes. (10) The result will be a geographic specialization which is in fact a substitution of transport inputs for various other inputs and a substitution of

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inputs, in general at the favoured sites for inputs at disfavoured ones. The scale effect will result in a tremendous increase in output because of the cheapening of transport inputs.

In Pakistan the prohibitive (11) transport costs may lead to a substitution of the different inputs for transport inputs resulting in the setting up of certain industries in East Pakistan, even with a higher cost of production than West Pakistan, instead of their concentration in any one of the two regions. This means that the high transport costs may force the production pattern into a more scattered or ubiquitous set up as between the two regions - this effect being contrary to that of a lowering of transport costs. A reduction in transport inputs is possible only to the extent the industries exporting goods to the other region may be set up nearest the portheads: Karachi in West Pakistan and Chittagong-Chalna in East Pakistan. Beyond that a reduction is just not possible without greatly improving the means of transport which can be done only gradually. A regional balance, if forced upon the two wings, will necessarily have to include in the cost of production, the transport costs over the 3,000 miles separating East and West Pakistan raising the price in the other region very greatly. It may not be economical thus to balance the industrial set up regionally. It may be much better to support the inherent tendency towards scattering the pattern of production over the two regions in such a manner that the two are almost independent of

(11) The transport costs may be especially so in view of the undeveloped state of shipping in the country.
each other. In a spatial set up transport function is as vital an aspect of production as the functions of labour, capital, land and the entrepreneur.

The productive activity of an industrial concern may be divided into three categories:

(a) Procurement of raw material and transportation to the factory;
(b) Conversion into finished or semi-finished products; and
(c) the transfer and distribution of products from factory to market.

a and c involve essentially the element of transport inputs. If the transport cost of bringing raw material is higher than that of moving goods to the market, then the concern will be located close to the raw material supplies and vice versa. In certain cases industries may lie somewhere in between the two extremes as a result of which these may profitably be situated in a variety of locations between sources of supply and places of consumption provided transport costs are minimized. Such a splitting apart of the production and consumption may not be possible in the case of East and West Pakistan in the sense that the raw material may be found in one region while its processing into a finished product and the consumption of the finished product may take place in another region. (12) In short a regional balancing of the industries may be out of the question. It will be necessary to

(12) For instance the raw materials for the production of fertilizers are available in West Pakistan while the demand for fertilizers exists primarily in East Pakistan.
convert the raw material into a finished product in the same region and then it may be consumed within the same region, exported to other countries and in exceptional cases to the other region also.

2. A second group of location factors comprises the inputs associated with raw material, labour, power, insurance, interest, the geographical factors and the institutional set up. These tend to vary haphazardly, independent of direction and distance. (13)

Generally the basic industries are highly input-oriented. The pull of the raw materials on their location is rather strong leaving little scope for alternative sites and any shift away from the resource base is possible at a relatively higher cost of output. But recent advances in technology have shown that such an approach is no more necessary. It has been proved that locational shifts are possible by changing the input composition without greatly increasing the total cost to the consumer and the "differential benefit may be significant to the spatial structure of economic growth." (14) Improved technology has resulted in a decline of the input-output ratio. Moreover the need for a continual adjustment of production to the consumers' needs, pulls the industry away from its input base. Plants therefore may be dispersed so as to maximize profits with reference to their market structure rather than to minimize costs with reference to resource inputs. This tends to reorient the industrial set-up in favour of

(13) Isard, n. 8, 138.

their consumer location. But the input pull would persist and especially so, in the case of the basic and heavy industries. These twin forces may lead to a vertical disintegration in the production process of the heavy industries wherein the initial stages of production may be located near the input source while the later ones may develop near the market. (15) So a whole lot of sub-foci tend to develop between the resource base and the market.

The very fact that industries have become less input-oriented may mean that East Pakistan as well as West Pakistan can have their own industrial set-up according to their consumption needs - raw materials or no raw materials. An independent production set-up for the two regions may mean slightly higher costs to the consumer but such a set-up will result in considerable benefit from the viewpoint of regional economic development and the higher cost of production may be more than made up by the saving of transport costs, leaving the consumer worse off in no way. Moreover, by having an independent set-up, what East Pakistan may lose because of a shortage of minerals, organisation, power etc. may well be gained in cheap labour, an availability exclusively there of raw materials for tea and jute industries, forest resources etc. Similar things could be said for West Pakistan also. Moreover, the productive process may disintegrate because of the dual forces of market and input base and certain sub-foci may develop but only between the interior and the porthead of a region and not between

(15) Ibid., 216.
the two portheads. And a balancing of development in the two regions, whether on the basis of input availability or market proximity even with this disintegration, may raise the difficulty of enormous transport inputs. An independent set-up on the other hand will not involve any such problem along with the added advantage that people of a region will be free to develop the region according to their own aspirations.

3. The third group of factors determining location consists of the diverse elements which generate agglomeration and deglomeration economies. Agglomeration economies include: (16)

i. Large scale economies resulting from an enlargement of a firm's scale of production at one point;

ii. Localization economies for all firms in a single industry at a single location, as a result of an increase in the total output of the industry; and

iii. Urbanization economies for all firms in all industries at a single location because of the expansion in the size of that location.

Degromerative forces on the other hand cover chiefly: (17)

i. diseconomies in a firm because of over-expansion;

ii. the rise in rents and costs of urban services because of congestion; and

iii. the rise in the cost of food supply due to excessive population settlement leading to extensive cultivation.

Agglomerative forces play an important role in promoting industrial activities. Induced resources have a tendency to cluster mainly around the initial locations. Locational proximity to intense economic activity promotes entrepreneurial optimism and

(16) Isard, n. 8, 172.

(17) Ibid., 139.
the rising local requirement induces fresh investment through a favourable demand. In addition to the advantages offered by existing settlements, others come from nearness to a growing centre where an "industrial atmosphere" has come into being with its special receptivity to innovation and enterprise. "These external economies then tend to accommodate the induced resources into a growing pattern of interdependent industries. Economic growth thus becomes self-generating in a spatial configuration of the agglomerative tendencies." (18)

The entrepreneurs tend to concentrate on their efforts in availing themselves of the local investment opportunities, ignoring those arising elsewhere. (19) Usually these forces cause over-concentration of industries. Diseconomies due to congestion and an overworking of social overheads also begin to appear but are not sufficiently strong to discourage the agglomerating tendency of a new firm since the rising costs are shared by a number of firms. And for the new firm the economies expected from concentration may still be rather attractive. Congestion, therefore, continues resulting in an imbalance in the regional economic structure. (20) Deglomerative tendencies may emerge after a certain point, either of their own accord or may be forced by the planning authorities. (21)

(18) Wagle, n. 14, 205.
(20) Wagle, n. 14, 206.
(21) E. M. Hoover, The Location of Economic Activity (New York, 1948) 251-64.
The operation of these tendencies is independent of geographic position. They are adaptive and they materialize subject to the smooth functioning of the other location factors. These forces may be passive spatially but their intensities are likely to be influenced greatly by 'distance' in the case of the two regions of Pakistan. In Pakistan the two tendencies may lose all force beyond the frontiers of a particular region. Moreover as a result of the social and structural differences the two may be weakened still further. Agglomerative tendencies originating in West Pakistan will not be able to attract entrepreneurs from East Pakistan and degglomerative tendencies will in no case be able to disperse the entrepreneurs over to East Pakistan unless forced by the government. The agglomerative and degglomerative forces will, therefore, function for the various locations within a region and not between the two regions giving to each a more or less independent set-up. With this background, if a programme of balanced regional growth is imposed on to the two regions, a number of problems may emerge frustrating such an attempt. On the other hand a planned independent set-up for the two regions may only advance the inherent trends in the two to develop separately still further.

Two solutions have been discussed mainly


2. Growth of the two regions with independent growth patterns.
   (i) With significant interdependence of the two regions; or
   (ii) With the minimum essential interdependence.
We have thus found that I and 2(i) are not suitable for the development of East and West Pakistan. The inherent trend in the two regions, because of the various factors mentioned, should be to develop themselves independent of each other as two self-contained units. Planners instead of going contrary to this, should strengthen it through a conscious policy. But a minimum of trade relations are essential from the viewpoint of economic as well as political expediency. The important question is what compositional pattern should these restricted trade relations follow and why? Before these questions can be answered, it is necessary to examine whether or not the two regions separately possess the means to initiate and carry through an independent programme of economic growth.

Potentialities for Growth

For finding out whether or not a particular region can support a pattern of growth, attention may be focussed on the 'inherent potentialities' for future development apart from the existing level of development in any region. Potentialities for further growth can be measured in three ways: (22)

1. as potentialities for increases in the volume of economic activities;

2. as potentialities for increases in efficiency;

3. and as potentialities for increases in levels of living.

The trend of changes in the total output or population may show the movement of the regional economy in general and also give some idea about the inherent potentialities of the region. But at the same time certain imperceptible structural changes may be taking place which on maturity may change the trend lines absolutely. So there is a need for indicators that can provide useful information regarding regional potentialities. The technique which may be helpful in evaluating past and present development may not be so in the case of future. Quantities like the value of output bring into light the end product of the working of a socio-economic complex and may provide an insight into the performance of the region's economy. But for evaluating the potentialities of a region, the index must have a built-in evaluative apparatus. (23)

In the absence of such a theory, experience, observation and analysis have brought forward certain social, political and economic elements essential for economic development. Economic elements for regional development involve problems different from those involved in national development. Economic elements consist mainly of the factor endowment of a region and the efficiency of utilization found there. Of the three basic factors of production - land, labour and capital - the last two possess considerable mobility. The most important question then turns out to be: "What is the current status of the economy of a region as far as its seeming ability to hold and attract labour and capital resources is concerned?" (24)

(23) Ibid., 50.
(24) Ibid., 51.
The question may be meaningless for Pakistan where there is little or no mobility of labour and capital between the two regions because of social, psychological and geographical reasons. So each region may have to depend primarily on whatever capital and labour it has, apart from external capital. But under planning the government may effect transfer of resources from one to the other in order to help the region with an inferior endowment. There has been a net transfer of services like banking and insurance from West Pakistan to East Pakistan. Moreover, West Pakistan has been contributing a larger share to the expenditure of the Central Government on defence, general administration etc. which means an export of these services to East Pakistan. Again the Second Plan provided that the Central Government directly undertake an expenditure of Rs. 1,400 crores in East Pakistan. This means that the resources raised in West Pakistan will partly be spent in East Pakistan. (25)

The problem of transferring private capital will be much more difficult though some results may be achieved through tax incentives, creation of social and economic overheads, development of banking and insurance facilities etc. (26)

But there is no doubt about the fact that the problem of inducing economic growth is sometimes made rather difficult by an inherent lack of good resources in a particular region. The factor endowment of a region gives it an inherent industrial potential or

(25) SFYP, 410. But on the whole there has been a net transfer of resources from East to West Pakistan. Such a transfer took place in terms of foreign exchange and the uneven distribution of external assistance.

(26) Ibid., 410.
otherwise and the differences in economic geography crystalize into differences in developmental topography. (27) Frequently it may happen that activities continue in a backward region till such time as the impact of the initial basic investment continues but after a short while the induced resources recede and the region may once again relapse into stagnation. Precisely such a situation may arise in East Pakistan if the Central Government undertakes certain investments and the local entrepreneurs fail to rise to the occasion. In such a situation, creation of certain industrial zones with a few dynamically expanding units of, say chemical or certain export industries may be helpful in creating industrial nodes in such areas. (28) Responsiveness of local capital to growth stimuli depends, apart from other things, upon the inherent potentialities of a region. The inherent potentialities can be measured to the extent these are reflected in the current structural changes and more basically the 'factor endowment.' (29)

Current structural changes may be of some use as measures of the potentialities of a region in an 'unplanned' economy but under planning the per capita capital outlay, rate of return on investment, rate of increase in productivity etc. may be pushed up

(28) Ibid., 217.
(29) Current structural changes may or may not be indicative of the factor endowment of a region. Moreover factor endowment here has been used with reference, not to land, labour and capital, but strictly speaking to the 'natural endowment' of a region.
even if a region has no 'inherent potentialities' for growth of this type. So current changes can be quite misleading as indicators of growth potentialities. The only and the basic indicator of the growth potentialities is the 'natural endowment' of a region including the natural resources i.e. minerals, water resources, agricultural resources, forest resources, availability of skilled and unskilled labour, the institutional set up etc. The endowment of these factors cannot be expected to be regular, and irregularities like the deficiency of some may be matched by the abundance of the others. In view of this the basic question with regard to the potentialities becomes: Given a certain quantity of capital, can a region support a number of industries which may transform the region from a stagnant to a developing unit of the economy?

Though East Pakistan is deficient in minerals, this deficiency is more than made up by rich forest resources, water resources, agricultural raw materials etc. The hill tracts of East Pakistan are of great economic importance not only to this region but also to the country as a whole, owing to the small percentage of forest resources found elsewhere. These forests do and can yield enough timber of an appropriate quality for telegraph and electricity poles, 'soft wood' for boxes and matchsticks, 'goran' tree the bark of which is an 'excellent tanning material, pencil wood from 'dhundal' tree, timber for railway sleepers, huge quantities of excellent bamboos used also in the paper mills etc. (30) The soil of the region is very suitable

for growing teak which is grown in plantations and about 1400 acres are added every year. (31) East Pakistan is also greatly suitable for the development of the jute industry, tea industry, rice milling, saw milling, leather and footwear, sugar industry, cotton textiles, paper, cigarettes, match-sticks etc. Abundance of clay makes possible the development of the pottery industry and 'refractories'. There are enough of water resources but no precipitation for generating electricity, so it may be somewhat difficult, though not impossible, to generate electricity. Discovery of natural gas near Sylhet has added greatly to the power resources of the region. Apart from these major industries for which the region is naturally suitable, a number of other industries, minor and major, can be developed with some help from the government. (32)

West Pakistan, on the other hand, is better endowed and is suitable for the development of chemical industries including fertilizers, cement, sugar, textiles, engineering, iron and steel, wheat milling etc. West Pakistan is also rich in power resources specially after the discovery of Sui natural gas. Moreover both the regions can develop a large number of cottage industries also. The two regions can thus develop independently of each other on the basis of these industries converting their economies into developing units.

(31) Ibid., 200-2.

(32) The possible sectoral orientation of the economic development programme in the different regions has been discussed at some length in Chapter VII.
But economic growth of regions depends not only on their resource structures but on interrelations between them, which apart from other things is a function of distance between the two. (33) Space affects trade in the sense that a region tends to trade more with the near regions than with the distant regions. At the same time, the extent to which any given region trades with another region, depends on the income of this other region. The higher the income of the other region, the greater the commodity flows between the two regions, ceteris paribus. Combining the two factors, income and distance, we obtain \( Y/d \) as the measure of the 'income potential' in a given region created by a second region with income \( Y \) and distance \( d \) from the given region. If we consider only two regions, \( i \) & \( j \), then the income of \( i \), in so far as it is derived from trade with \( j \), depends upon the income of \( j \) and the distance between \( i \) and \( j \), for the volume of trade that \( i \) can have with \( j \) depends, among other things upon the cost of transport of goods between \( i \) and \( j \). (34)

With the help of this measure we can 'partially' account for the effect of changes in income in West Pakistan upon trade with East Pakistan and upon the growth of East Pakistan. This measure will highlight the effect of income only on trade and growth of the other region - income being one of the important factors affecting those.

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(34) Ibid., 436.
When the two regions develop independently, the factor playing the predominant role in guiding the pattern of development or the choice of industries to be developed will be the 'growth potentialities' of the region in terms of its factor endowment. Though the two regions are supposed to develop independently following different patterns of development, it does not rule out all trade between the two. A minimum amount of trade, as has been mentioned, will be essential and will take place. As a result of this the various industries in the two regions will fall clearly into two groups: those in which inter-regional trade is carried on and those in which there is no inter-regional trade. Under a model where the two regions are developed independently, the division of industries will be the result also of conscious and deliberate efforts along with that of the market forces. Such trade relations between the two or the division of the industries into the two categories can be explained with the help of input output analysis. As such input-output analysis focuses attention on inter-industry relations in a spaceless economy. These relations are reflected in structural co-efficients derived from production functions and household income consumption pattern. The introduction of space into the system changes it considerably. (35) An inter-regional input-output model gives us greater insight into the inter-relationship of the two regions and the impact of one on the other. It also provides us with the regional breakdowns of the national aggregates.

(35) Isard and Freutal, n. 33, 460.
Recently a number of input-output models have been put forward by Leontieff, Isard, Moses etc. (36) Leontieff model has been shown to be a special case of the Moses model (37) and Isard model is, operationally, of a very limited utility since it requires information on the source and destination of each commodity moving in inter-regional trade. (38) Moses model on the other hand has been extended by S. M. Naseem in order to cover all the possible trade patterns between any two regions and this can give us insight into the pattern of trade that should evolve as between East Pakistan and West Pakistan when the two are following independent patterns of growth.

It is assumed that each region purchases its requirements of every commodity according to a fixed regional supply pattern. These supply patterns are embodied in a set of trade coefficients 't' for every commodity. (39) If assumptions are made regarding the values of the trade co-efficients, a number of industries with characteristic features can be distinguished. For simplicity this will be confined to two trading regions only and more so because Pakistan has been divided into two regions only. Then for an industry 'i' four

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(37) S. M. Naseem, Towards the Application of Inter-regional Input Output Models to Economic Planning in Pakistan (Karachi, 1960) 17.

(38) Isard and Freutal, n. 33, 465-6.

(39) Naseem, n. 37, 16.
trade co-efficients can be conceived of $t_{11}^{11}$, $t_{21}^{11}$ and $t_{12}^{12}$, $t_{12}^{22}$. There can be 16 cases in which none, some or all trading co-efficients are equal to zero. These 16 cases have been classified into 10 groups which are discussed one by one with reference to their relevance for East and West Pakistan.

**Group I - Non-existent Industry**

Case 1: Assume $t_{11}^{11} = t_{12}^{12} = t_{21}^{21} = t_{22}^{22} = 0$

This is an ordinary case where the industry has no existence in the economy.

**Group II - Weak Regionally-balanced Industry**

Case 2: $t_{11}^{11} = 1; t_{12}^{12} = t_{21}^{21} = t_{22}^{22} = 0$

Case 3: $t_{22}^{12} = 1; t_{11}^{11} = t_{12}^{12} = t_{21}^{21} = 0$

This is the case of a commodity which is produced and consumed only in one region. The industry does not exist in the other region. This is just a special case of the 'Strong Regionally-balanced Industry' of Group VI and is fully covered by that. Such a commodity may either be a raw material or a consumer good and some of the goods produced in East and West Pakistan fall under this category but are better covered by Group VI.

**Group III - 'Colonial Industry'**

Case 4: $t_{12}^{12} = 1; t_{11}^{11} = t_{21}^{21} = t_{22}^{22} = 0$

Case 5: $t_{21}^{21} = 1; t_{11}^{11} = t_{12}^{12} = t_{22}^{22} = 0$
Under this a commodity is produced only in one region and is consumed solely in the other. This commodity may either be a raw material or a semi-finished product. Such a trading pattern may exist in the inter-regional trade of East and West Pakistan, though the likelihood is very small because of the high transport cost. But even if such a pattern exists, the decision to develop the two wings independently will bring it to an end.

**Group IV - Regionally Monopolized Industry**

Case 6: Assume $t_{11}^{11} \neq 0$, $t_{12}^{12} \neq 0$, $t_{11}^{21} = t_{11}^{22} = 0$

Case 7: Assume $t_{11}^{21} \neq 0$, $t_{12}^{22} \neq 0$, $t_{11}^{11} = t_{12}^{12} = 0$

This refers to the case where a region specializes completely in the production of a commodity. Such specialization is primarily due to the differences in factor endowment. A number of industries of this type do and may exist in Pakistan even under an independent framework for the two regions. For instance jute and tea in East Pakistan and woollen textiles in West Pakistan are some such industries. Under an independent set up for the two regions, this type of commodities will form one category in which trade between the two will be carried on.

**Group V - Regional Consumption Industry**

Case 8: Assume $t_{11}^{11} \neq 0$, $t_{12}^{21} \neq 0$, $t_{11}^{12} = t_{12}^{22} = 0$

Case 9: Assume $t_{12}^{12} \neq 0$, $t_{12}^{22} \neq 0$, $t_{11}^{11} = t_{12}^{21} = 0$
This commodity is produced in both the regions but is consumed only in one. This will more likely be a raw material and one region is likely to be deficient in factor endowment required for processing etc. Moreover high overhead costs may be another limitation. In spite of these limitations such a pattern of trade will not evolve between the two wings of Pakistan, first, because there is very little similarity between the raw materials produced in East and in West Pakistan and, second, an independent set-up of the two may discourage such a pattern because an effort may be made somehow to utilize the raw material within the region producing it.

**Group VI - Strong Regionally-balanced Industry**

Case 10: Assume $t_{11} \neq 0; t_{22} \neq 0; t_{12} = t_{21} = 0$

In an independent set up for East and West Pakistan a majority of the industries will be regionally balanced. In the case of such an industry

$$X_1 = D_1; \quad X_2 = D_2$$

and

$$X_1^2 = D_1^2; \quad X_2^2 = D_2^2$$

where $X = \text{regional output and } D = \text{total regional demand}$.

In East Pakistan this may include a large number of agricultural goods, fish, raw sugar, certain forest based industries etc. and for West Pakistan also this may include similar goods.
Group VII - Barter Industry

Case 11: Assume \( t_1^{12} \neq 0 \quad t_1^{21} \neq 0; \quad t_1^{11} = t_1^{22} = 0 \)

Both the regions produce a commodity but each consumes output only of the other. Such a trading pattern is impossible between East and West Pakistan and more so when the two are following independent patterns of development.

Group VIII - Product Differentiated Industry

Case 12: Assume \( t_1^{11} \neq 0 \quad t_1^{12} \neq 0 \quad t_1^{21} \neq 0 ; \quad t_1^{22} = 0 \)

Case 13: Assume \( t_1^{12} \neq 0 \quad t_1^{21} \neq 0 \quad t_1^{11} = 0 \)

This also is the case of a commodity which is produced in both the regions but the output of one is consumed entirely by the other because of the existence of product differentiation i.e. there may be differences in the quality of the two products. Such an industry could not exist in either region of Pakistan under an independent set up for the two.

Group IX - Surplus Industry

Case 14: \( t_1^{11} \neq 0 \quad t_1^{21} \neq 0 \quad t_1^{22} \neq 0 ; \quad t_1^{12} = 0 \)

Case 15: \( t_1^{11} \neq 0 \quad t_1^{12} \neq 0 \quad t_1^{22} \neq 0 ; \quad t_1^{21} = 0 \)

Under this is included a commodity which is produced in both the regions but one region has excess demand while the other has excess
supply after meeting its total regional demand. The excess supply or the surplus from the latter can be transported to the former in order to meet the excess demand or the deficit existing there. A number of industries or commodities fall under this category in the existing trade pattern between East and West Pakistan, such as cotton textiles, rice, wheat etc. in West Pakistan and matches, paper, fine cloth etc. in East Pakistan. With some effort it should be possible to reduce the number of such goods appreciably and convert such industries into regionally balanced industries in an independent set-up for the two regions. But in spite of that some trade between the two regions under this group may be essential and it may form the second category of goods traded inter-regionally—goods in the case of which a region does not produce enough to meet its demand and has to import these from the surplus region.

Group X - Moses Industry

Case 16: \( t_1 \neq 0, t_2 \neq 0, t_1 \neq 0, t_2 \neq 0 \)

This is the pattern of the Moses industry which is produced as well as consumed in both the regions. It is unlikely for a pattern of trade between the two regions in Pakistan.

We thus find that the Moses model embraces a large variety of industries whose trading patterns are known in advance. The practical implementation of this model therefore consists primarily in classifying the various industries according to the trade patterns followed by them between the two regions. When Pakistan follows an independent developmental pattern for each of its
regions only three types of industries will be relevant from its viewpoint i.e.

(i) Strong regionally balanced
(ii) Regionally monopolized and
(iii) Surplus industries.

In the case of (i) there will be no trade between the two regions but there may well be trade between a region and the neighbouring countries changing the equation from \( x_1 = d_1 \) to \( x_1 = d_1 + f_1 \) where \( f_1 \) stands for the exports of region one, commodity one to the other countries. Moreover for the production of the same commodity the two regions may adopt different technologies meaning thereby that the production co-efficients in the two regions may be different. This will specially be so in the case of East and West Pakistan because of the marked differences in their factor endowments.

The pattern of trade between the two regions will be determined by (ii) and (iii) types of industries which will include trade because of factor endowment differentials and the incapacity of a region to meet its demand locally. This pattern of inter-regional trade will eliminate all those commodities in which trade is not absolutely essential but at the same time will ensure the necessary trade relations between the two regions.

Though the Plans contain absolutely no reference to the possibility of having an independent set-up for the two regions, consciously or unconsciously, these may bring about such a set-up. The Second Plan at least laid down provisions for the manufacture of fertilizers and chemicals locally in East Pakistan. It proposed
to set up a steel plant also and laid down that stress will be laid mainly upon the exploitation of local resources. (42) Moreover East Pakistan has its own shipyard and dockyard, a number of large scale units for the manufacture of electrical appliances and cables etc. (43) The Second Plan also proposes to attain self sufficiency for East Pakistan in certain agro-industries like sugar etc. (44) It is clear from these steps that the Pakistan Planning Commission realizes that it is not possible to introduce a pattern of development embracing the two regions as one. And the alternative is to develop the two as separate units.

(42) SFYP, 400.


(44) SFYP, 400.