

THE URBAN DEVELOPMENT PROBLEM IN  
TRINIDAD AND TOBAGO

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CARLYLE WESLEY ST. CLAIR WARNER

L. L. S., Trinidad Departmental Survey School, 1957

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For

Claire, Lorraine, Mark-Anthony and Mother

"Thus it happens in matters of state; for knowing afar off (which it is only given to a prudent man to do) the evils that are brewing, they are early cured. But when for want of such knowledge, these are allowed to grow so that everyone can recognize them, there is no longer any remedy to be found."

Niccolo Machiavelli, The Prince, Chapter III

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## INTRODUCTION

### Situation

Trinidad and Tobago is a small country consisting of two islands. The island of Trinidad lies between 10 degrees 3 minutes and 10 degrees 50 minutes north latitude, and 60 degrees 55 minutes and 62 degrees west longitude. Situated seven miles from the Venezuelan coast, it is in the southern part of the Caribbean Sea, and forms the southern tip of the West Indian archipelago stretching from Florida to the South American continent. Tobago lies approximately 20 miles northeast of Trinidad. Trinidad is roughly rectangular in shape, 50 miles long and 35 miles wide with an area of 1,863 square miles. Tobago is about 26 miles long and 10 miles broad with an area of 116 square miles, making the territory a total of 1,980 square miles.

### History

After 165 years of colonial rule under the British Crown, the territory attained its independence on August 31, 1962. This period was subsequent to an interval, of approximately 300 years after the islands were discovered by Columbus, during which, as pawns, in the quest of the European Metropolitan powers for colonies and Empire, they changed hands as frequently as the fortunes, in war, of these powers fluctuated.

Little was done to colonize the island of Trinidad after its discovery until May, 1777, when it was visited by Philip Rose Roume de St. Laurent, a French planter, from the neighboring island of Grenada.

Struck by the richness of the soil and the potential of "bettering his condition" here, he decided to make it his home. Up to that time the population only numbered "1000 souls,"<sup>1</sup> and thus there was a severe manpower shortage. Hence he devised his colonization scheme, the Cedula of Population, which was eventually promulgated by the King of Spain in 1783.<sup>2</sup> "It succeeded in drawing considerable numbers of people from the neighboring islands to Trinidad; and to its provisions alone must be attributed the marked rise in the population which took place in that island immediately preceding the capitulation"<sup>3</sup> to Britain in 1797. The population by this year had reached 17,643.<sup>4</sup>

The British established a Crown Colony system of government in the island. Trinidad, and subsequently Tobago, were thus ruled under a system in which the metropolitan government retained complete control.<sup>5</sup> This represented a departure from the traditional pattern followed in their older West Indian colonies such as Jamaica and Barbados. In these colonies a self governing constitution established a bicameral legislature with a fully elected lower house and governor, representing the Sovereign, working more or less in harmony with the elected

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<sup>1</sup>Jos. A de Suze, Little Folks Trinidad (London: William Collins Sons and Co., Ltd., 1951), p. 140.

<sup>2</sup>Ibid., p. 140; Eric Williams, History of the People of Trinidad and Tobago (Trinidad: P. N. M. Publishing Co., Ltd., 1962), p. 42.

<sup>3</sup>Government of Trinidad and Tobago: Report of the Census of 1946 (Trinidad: The Government Printer, 1948), p. 28.

<sup>4</sup>Williams, op. cit., p. 48.

<sup>5</sup>Williams, ibid., p. 73.

representatives of the people.<sup>6</sup> This pattern of government prevailed in Tobago when it eventually was acquired by Britain in 1802. But, in 1898, on the collapse of its sugar economy, it was merged with Trinidad, and relegated to Crown Colony government.<sup>7</sup>

Government by a governor and a fully nominated executive and legislative council continued until 1925, when a limited representative government was introduced. Executive power, however, remained with the Crown through its direct representative, the governor. Thus executive and administrative actions continued to be initiated and directed by the Colonial Office in London. Hence, legislative action was limited and rarely reflected the needs of the local community.<sup>8</sup>

The direct consequences of this form of government from-afar were a feeling of complete frustration in the community resulting in almost permanent opposition to the government, and a constant tendency to criticize government action. The people tended to think of government as "they" instead of "we." A critical break occurred in the system in 1937 when the territory experienced serious strikes and civil disturbances. A Royal Commission, appointed by the British Government to investigate the circumstances surrounding the strikes, resulted in two important consequences: a far reaching program to improve and transform social conditions, and, secondly, a restructuring of the administrative and political system in the Territory. This paved the way for the

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<sup>6</sup>Williams, ibid., p. 68.

<sup>7</sup>Williams, ibid., pp. 140-151.

<sup>8</sup>Williams, op. cit., pp. 221-224.



country to proceed to universal adult suffrage in 1946. These changes set off a chain reaction leading to the emergence in 1956 of the first representative party government in the Territory, and in 1959 in the introduction of Cabinet government, whereby executive action was vested in the cabinet headed by a Premier, and finally culminating in independence in 1962. Thus ended the situation in which, among other things the metropolitan power thousands of miles away decided upon the use of land in terms of its own objectives and colonizing interests rather than for the purposes of local social development.<sup>9</sup>

#### History of Urban Development

The oldest recorded town in Trinidad is, the first capital, San Jose de Oruna (now called St. Joseph). It was founded in or about the year 1584 by Don Antonio de Berrio.<sup>10</sup> In 1783 the seat of government was however moved to Port of Spain, the site of the old aboriginal Indian village of Conquerabia, by Don Jose Maria Chacon, the Spanish governor and Captain-general.<sup>11</sup> In those days of bad roads and worse conveyance, he saw the "good" that would accrue to the country by having a sea port for the chief town. Chacon appears to have had a taste for city planning, for he is recorded to have embellished the city in many

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<sup>9</sup>Williams, *ibid.*, pp. 225-279.

<sup>10</sup>De Suze, *op. cit.*, p. 70.

<sup>11</sup>Government of Trinidad and Tobago, *op. cit.*, p. 9.

ways.<sup>12</sup> In 1792, he founded the town of San Fernando,<sup>13</sup> which has emerged as the second city in the territory. Nor was all his attention confined to the new settlers, it was also extended to the neglected Indians. He collected and grouped them into Missions,<sup>14</sup> some of which later became the sites of towns. Arima, the only other incorporated city, is one such example.<sup>15</sup>

In Trinidad and Tobago, as in the rest of the colonial world, cities and towns were founded only in so far as they were necessary as trading centers, through which the raw materials destined for the factories in the metropolitan "mother country," could be channeled. In this setting one "primate city" the administrative center and port always emerged.<sup>16</sup> "As commercial entrepots they served to collect and send abroad raw products from their own countries and to receive the manufactured products shipped back to them for distribution at home."<sup>17</sup> Like Djakarta in the then Dutch East Indies, and Saigon in French Indo-China, Manilla in the Philippines and Rangoon in Burma so was it Port of Spain in Trinidad and Tobago.

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<sup>12</sup>Williams, op. cit., pp. 47-48; DeSuze, op. cit., p. 145.

<sup>13</sup>DeSuze, op. cit., p. 145.

<sup>14</sup>DeSuze, ibid., pp. 144-145.

<sup>15</sup>DeSuze, ibid., p. 71; Government of Trinidad and Tobago, op. cit., p. 16.

<sup>16</sup>Eric E. Lampard, "History of Cities in Economically Advanced Areas," Economic Development and Cultural Change (February, 1955), Vol. 3, p. 131.

<sup>17</sup>Noel P. Gist and L. A. Halbert, Urban Society (New York: Thomas Y. Crowell, 1961), pp. 68-69.

In these situations, "the system of cities"<sup>18</sup> as described by Vining, in which cities if ordered by rank and size are distributed in accordance with Pareto's law fails to apply. Not even the ascendancy of the petroleum industry, located in the south was able to offset the dominance of Port of Spain. Hence as agriculture declined, Port of Spain extended its gravitational field along the Eastern Main Road, the Western Main Road, and the Diego Martin Main Road. In 1960 the conurbation thus formed, contained 29 percent of the total population. Hoselitz<sup>19</sup> observed this tendency of the colonial "parasitic city" to become the cradle of the generative city.

#### Resource Endowment

From the point of view of development, the most important natural resources of Trinidad and Tobago are land, forestry, fisheries, minerals, water and petroleum. Among the territory's other assets are location, climate, rainfall, soil and man power, the human resource.

#### Land

The latest land utilization survey was carried out by the Central Statistical Office in respect to the year 1957 and gives the following pattern of use indicated in Table I.

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<sup>18</sup>Rutledge Vining, "A Description of Certain Spatial aspects of an Economic System," Economic Development and Cultural Change (January, 1955), Vol. 3, pp. 147-195.

<sup>19</sup>Bert F. Hoselitz, "Generative and Parasitic Cities," Economic Development and Cultural Change, Vol. 3, pp. 287-291.

TABLE I  
LAND UTILIZATION

	Acres: 1958
<u>Non-Agricultural Areas</u>	
Residential and Industrial	)
Roads, Traces and Railways	)
Public buildings, Parks, Cemeteries, Schools, etc.	) 97,250
(including non-forest areas of U.S. Bases	)
Swamps (not included in forest areas) and Inland water	26,300
State Forests:	
Production Reserves	
Protection Reserves	318,525
Other State Forests	230,475
Private Forests	26,000
Abandoned tree crops, bush and secondary growth	<u>124,650</u>
Total Non-Agricultural Areas	823,200
<u>Agricultural Areas</u>	
Area in cultivation	330,200
Pastures	14,400
Semi-derelict crops and shifting cultivation	<u>99,450</u>
Total Agricultural Areas	444,050
<u>Total Area of Trinidad and Tobago</u>	1,267,250
of which leased for: Oil Mining--Crown lands (including forests)	362,128
Alienated Lands	116,036
Oil exploration--Crown Lands (including forests)	---

Source: Government of Trinidad and Tobago, Central Statistical Office, Annual Statistical Digest 1958, Table 102.

### Forests

About 45 percent of the total area of Trinidad and Tobago is covered by natural forest owned by the Crown. Of which, about 28 percent form fully constituted Forest Reserves. The remainder is known as crown lands. Approximately 40 percent of the total area under forests is considered accessible. The area under forest reserve might appear high, but it must be remembered that the high rainfall, the prevailing winds in the dry season and low fertility of the soil on which the reserves are situated, are all factors which justify the maintaining of a large reserve.<sup>20</sup>

### Fisheries

The water surrounding Trinidad and Tobago is not very amply endowed with fish. This is typical of the Caribbean Sea. It is however believed that there are more abundant supplies of Pelagic (i.e., inhabiting the upper layers of the sea bed) species of fish which are not at present exploited.<sup>21</sup>

### Minerals

Of the non-metallic minerals blue limestone is by far the most important. Yellow limestone and gypsum, used in the manufacture of cement, clay, porcellanite and deposits of sands and gravel (including glass-making sands) make up the rest of this category. Two surveys,

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<sup>20</sup>National Planning Commission, Draft Second Five Year Plan 1964-1968 (Trinidad and Tobago Government Printing, 1963), p. 55.

<sup>21</sup>Ibid.

during 1960 and 1961, failed to determine the presence of iron ore. However, further tests are contemplated in search of nonmagnetic ores.<sup>22</sup>

### Water

The yearly amount of water available through rainfall is about 2.6 billion imperial gallons. After allowing for loss through evaporation and seepage into the ground, a net amount of 1.1 billion imperial gallons is available for flow as surface run-off in the river systems, and constitute the surface potential factor of the water resources of the country. All relevant factors being taken into account, it is estimated that the usable surface water is only about 0.36 billion imperial gallons. In addition, about 0.24 billion gallons of water which seeps into the ground goes towards the replenishment of the underground water resources. The total available for supply is therefore about 0.60 billion gallons per year. Since the volume of water at present supplied for domestic and industrial use is about 63 million gallons per day, it is clear that the water resources of the country are not being fully utilized, and that there are considerable reserves for use in domestic, agricultural and industrial sectors.<sup>23</sup>

### Petroleum

In this category also falls natural gas and asphalt. Petroleum, however, dominates. Together they account for 30 percent of the country's gross domestic product, 35 percent of the gross current revenues

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<sup>22</sup>Ibid., p. 56.

<sup>23</sup>Ibid., pp. 56-57.

and more than 85 percent of domestic exports. In addition to producing petroleum, there is a large oil refining industry in Trinidad based upon both local and imported crude. Oil mining leases cover a great part of the territory's land surface and marine exploration areas are even more extensive.

Trinidad's known oil reservoirs contain about 2,000 million barrels. But of this, on the basis of present production techniques, only 402.5 million barrels is recoverable. By the use of more modern engineering techniques, however, it is likely that the total recoverable reserves can be increased to between 600 and 800 million barrels. IF there were no new discoveries of oil in the country, therefore at the present rate of production and using existing techniques the recoverable reserves would be exhausted in about eight years. With the most modern techniques this period could be extended by a further four to eight years.<sup>23</sup>

#### The Problem

Trinidad and Tobago is a small country with a high population density and also one of the highest population growth rates in the world. The 1960 census revealed that the population had grown from 557,970 at the time of the 1946 census to 827,957, an inter-censal annual growth rate of 2.87 percent. The significance of this growth rate, from the point of view of urban development, is best comprehended when it is realized that the population will double itself in twenty-two years,

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<sup>23</sup> Ibid., p. 57.

should this rate continue.

There are only two urban centers in the territory, the Port of Spain conurbation and the San Fernando "urbanized area." In 1960 the population of these two areas contained 302,300, or 36.5 percent of the total population.

Table II indicates that the urban population can be expected to almost double itself by 1970 and again in 1980.

TABLE II

	1960*	1970**	1980**
Total population	828,000	1,129,000	1,551,000
Rural population	525,700	525,700	525,700
Urban population	302,300	603,300	1,025,300

\* 1960 figures are rounded off values obtained from 1960 census.

\*\* 1970 and 1980 are unofficial estimates.

Source: Population Census Division, Central Statistical Office  
Government of Trinidad and Tobago.

This projection is based on the assumption that the rural population will remain stable over the period because of displacement of workers in agriculture as a result of mechanization and the existing "disguised



unemployment in the traditional sector."<sup>24</sup>

The conclusions arrived at from Table II are substantiated by Table IIa, which shows a second projection; the assumption in this case being that the total and urban population respectively will grow over the period examined by a compound rate equivalent to that of the 1946-1960 inter-censal period.<sup>25</sup>

TABLE IIa  
PROJECTED TOTAL, RURAL AND URBAN POPULATION 1970 AND 1980

	1946	1960	1970	1980
Total	557,970	827,957	1,097,040	1,457,204
Rural	428,266	525,657	543,831	444,499
Urban	129,704	302,300	553,209	1,012,705

Deduced on the basis of assumptions in Projection 1. (Jamaica, Trinidad and Tobago, Leeward Islands, Windward Islands, Barbados, and British Guiana, Projected Levels of Demand, Supply and Imports of Agricultural Products to 1975; Foreign Regional Analysis Division, Economic Research Service, U.S. Department of Agriculture, ERS Foreign 94, pp. 16-17.

<sup>24</sup>W. Arthur Lewis, "Economic Development, with Unlimited Supplies of Labour," The Manchester School (May, 1954); "Unlimited Labour: Further Notes," The Manchester School (September, 1961); Kazushi Ohkawa, "Balanced Growth and the Problems of Agriculture," Journal of Economics (September, 1961).

<sup>25</sup>Ibid. United States Department of Agriculture, Jamaica, Trinidad and Tobago, Leeward Islands, Windward Islands, Barbados, and British Guiana, Projected Levels of Demand, Supply and Imports of Agricultural Products, Foreign Regional Analysis Division, Economic Research Service, ERS Foreign 94, pp. 16-17.

Thus the problem is to postulate a national urban development policy that will accommodate this projected urban population in a satisfactory urban pattern.

#### Thesis

The Second Five Year Plan 1964-1968 states

...yet another important division of planning is physical planning. It is apparent that all economic and social planning has its physical dimensions, since economic and social projects and activities must be located or carried out in specific physical areas.<sup>26</sup>

However an examination of the Plan for evidence of spatial and regional thinking in its treatment of the various elements of the problem revealed a vacuum in this regard.

Young,<sup>27</sup> finding the same deficiency in Jamaica's Five Year Independence Plan, published in 1963, made the following observations:

...Both a comprehensive analysis of national growth and a development plan for the future would seem to be incomplete without consideration being given to uncovering the spatial structure of the national economy and to planning the future use of available space. The economist, the sociologist and the agriculturalist, to mention but a few of the specialists whose contributions to planning are highly regarded, have interests in space, and variations in the conditions existing from one area of the island to another. And the overall planner, seeking to fit all those developments considered important and desirable into a workable whole, must turn his attention not only to questions of "what" and "when" but also to questions of "where" and "together with what". He must try to view apparently unconnected development projects together and in their regional contexts. Regional

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<sup>26</sup> National Planning Commission, *op. cit.*, p. 15.

<sup>27</sup> Bruce S. Young, "Jamaica's Long Term Development Programme: A Comment," *Social and Economic Studies*, Vol. 13, No. 3, September, 1964, p. 370.

Planning is a matter of comprehensively organizing space; as such it represents the highest level of integrated planning. Lower levels concerned with the spatial aspects of any one facet of the economy are no less vital to proper development. In fact, of course, the plans for industry, for tourism, for agriculture, for health services, for water supplies, and so forth, fit together, or should be fitted together, to form the "master" regional plan. The objective of the exercise may be concisely stated as the maximization of the productivity of existing space and the minimization of waste and inconvenience, in terms of both economic and social values.

The Trinidad and Tobago Plan is mute on the question of the implications of the high population growth rate in respect to urban development. Furthermore it takes no cognizance of the inter-relationship between the process of urbanization and the process of economic development. No mention is made of any plan for the use of the location of economic activity as a tool in solving the general problem of formulating a policy for influencing the geographic pattern of population distribution. Questions as to what scale or pattern of urbanization would best promote the economic and social objectives receive no attention.

Desai and Bose make the following observation in this regard, "one lesson of western urbanization that the developing countries may profitably learn, is that it is economical in the long run to have an overall policy for guiding the course of urbanization from the very beginning of development."<sup>28</sup>

This paper will demonstrate the flaw in the planning structure

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<sup>28</sup> P. S. Desai and Ashish Bose, "Economic Considerations in the Planning and Development of New Towns," Background Paper No. 5, Conference on the Planning and Development of New Towns, Moscow, 1964.

which led to this omission and will propose that, in view of the already inadequate urban pattern which will be rendered even more so, by the population "explosion," decentralization must be the basis of the national urban development policy "so as to yield to the broadest segments of our society such levels of living as are commensurate with modern requirements of human dignity."

In support of this thesis the discussion will deal with broad aspects of the problem.

## CHAPTER II

### THE ANATOMY OF THE PROBLEM

#### The Evolution of the Planning Process in Trinidad and Tobago

The system of Crown Colony government was based upon the principle of strict separation of powers. The Governor, appointed by the crown, was in charge of the executive branch of the government, while the legislature's function was confined to the establishment of laws on a relatively limited range of matters. It assumed no direct responsibility for executive or administrative matters. In this setting little co-ordination between government departments existed. Programs reflected ad hoc decisions rather than long range positive policies.

Trinidad and Tobago, like most of the West Indies, enjoyed great prosperity based upon the sugar trade in the 18th and 19th Century. Its original rise, and, recent gradual decline, and yet, more recent rise due to the Cuban crisis, were motivated by external forces. A sugar economy is export oriented and susceptible to world conditions. In addition, sugar production traditionally involves absentee proprietors who also export their profits. Thus, economic planning such as existed was associated closely with this single largest sector of the economy and practiced by private individuals, absentee owners, whose objectives were hardly in concert with the desires of the local communities. As the relative importance of sugar as the key sector of the economy declined steadily the petroleum industry took its place. It too is controlled from abroad.

Another strand to the planning movement in Trinidad and Tobago evolved as a consequence of the report of the West India Royal Commission of 1938. Its recommendations, published shortly after the outbreak of World War II emphasized social needs and proposed financial aid from the Imperial Treasury, and a special organization to administer the funds. It said, "there is a pressing need for large expenditure on social services, which not even the least poor West Indian colonies can hope to undertake from their own resources." The Commission recommended the establishment of the Colonial Development and Welfare Organization to administer an aid fund and to focus, particularly on education, health services, housing and slum clearance, in areas of social reform. This organization did a great deal to foster the notion of long range planning by insisting on proper programming of projects by the territorial government, as a condition for financial assistance. This organization lasted for 17 years, and was dissolved in 1957. This was the origin of social planning in the country.

The circumstances surrounding the introduction of both physical and economic planning are significant. Both were introduced in the wake of constitutional changes which gave the people a greater voice in government.

#### Physical Planning

In 1929, four years after the first election in the territory, government appointed a committee to advise on the introduction of town and country planning legislation. The matter however lay in limbo for years until 1937, another historic year in the annals of the country,

when a Town Planning Board was set up. The following year witnessed the passage of the Town and Regional Planning Ordinance. This empowered the making of planning schemes with respect to any land, whether urban or rural for the purpose of ensuring the "orderly and progressive development of land, cities, towns and other areas."<sup>29</sup> In Trinidad, as in other West Indian areas, the need for planning was closely linked to the immense problem of overcrowding and slum clearance in the urban areas. The Ordinance was, in fact, a corollary to the Slum Clearance and Housing Ordinance which was also enacted in 1938. A joint authority, the Planning and Housing Commission, was established to effectuate these two ordinances.

The planning ordinance followed the English act of 1932 very closely. It enabled provisions for the preparation of statutory planning schemes, control of interim development, powers to enforce planning schemes, compulsory acquisition of land, compensation for acquisition on injurious affection to property, exclusion or limitation of compensation in respect of certain restrictions based on the principle of "good neighbourliness," and recovery of "Betterment." In 1940 an ordinance restricting Ribbon Development was enacted as an additional instrument of control.

It is worthy of note that this legislation in the colonial period made no provision for the general public to be given the opportunity to raise objections to a planning scheme before it was approved by the

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<sup>29</sup>Government of Trinidad and Tobago, Town and Regional Planning Ordinance: CL 37, No. 3, 1940.

Governor. Local authorities were to be consulted, and the Governor to be notified of their objections before he approved the scheme. He was empowered, however, to hold a public enquiry, if he so wished, before exercising his power of approval. There was no provision for statutory consultation with other authorities or bodies.

The piecemeal planning that emerged as a result of this legislation was completely inadequate and consequently the urban pattern deteriorated further under the pressures created by the high population growth rate. In 1960, the Government retained Mr. Desmond Heap, a British expert in Planning Law, to prepare a draft of more modern and comprehensive legislation. This resulted in the enactment later in the same year, of a new Town and Country Planning Ordinance. The ordinance established a three part planning framework:

1. The preparation of a development plan based upon a comprehensive survey of the territory.
2. That any development of land within the territory becomes subject to development control.
3. It establishes the duty of the Minister, charged with administration of the Ordinance, to secure consistency and continuity in the framing and execution of a comprehensive policy with respect to the use and development of all land in the territory in accordance with the development plan for the Territory.

#### Economic Planning

Soon after the introduction of adult suffrage, in 1946, national



economic planning for guiding the economic growth of the territory was introduced. The process of preparing "Five Year Plans" and revising them periodically in terms of supplementing and adjusting their content is thus well established.

#### The Contemporary Planning Framework

It was, in the setting described above that in 1956 the territory achieved its first representative party government. One of the first acts of the Prime Minister was the establishment of a Planning Bureau, which was initially to undertake physical as well as economic planning. However, this promised integration of the planning process never materialized. In 1959, a report<sup>30</sup> on the reorganization of the public service, limited the Planning Bureau to the economic sphere, and, recommended the establishment of a Town and Regional Planning Division in the Office of the Premier. This latter was to "work in close collaboration with the economic planning division,"<sup>31</sup> the name which the planning bureau assumed in 1960.

Further evidence that the government has so far failed to fully recognize the locational and spatial aspects of economic growth as provided by an examination of the White Paper<sup>32</sup> dealing with and the

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<sup>30</sup> Government of Trinidad and Tobago, "Report to the Hon. the Premier by the Hon. Ulrie Lee on the Reorganization of the Public Service" (Trinidad and Tobago: the Government Printer, 1959), para. 114.

<sup>31</sup> Ibid.

<sup>32</sup> Ibid., "White Paper on the Functions, Powers and Composition of the National Planning Commission" (Trinidad and Tobago: The Government Printer, 1963).

composition of the National Planning Commission which was established in 1963. The text of the White Paper reads as follows:

1. Under the Cabinet, the National Planning Commission is the supreme planning authority of the country.
2. The Commission shall comprise the following:

The Prime Minister -- Chairman;

The Minister of Finance -- Deputy Chairman;

The Minister or Ministers responsible for Agriculture, Industry and Petroleum;

The Minister of Labour;

The Director of Statistical Service;

A Representative of the proposed Central Bank;

Two additional persons to be selected by the Prime Minister on the basis of individual competence;<sup>33</sup>

The Head of the Economic Planning Division, Office of the Prime Minister -- Secretary/Member;

The Secretariat of the Commission shall be the Economic Planning Division, Office of the Prime Minister.

3. The Commission shall be responsible for the formulation of long-term, medium-term and annual plans for the improvement and expansion of the country's material resources; for the fullest development and utilisation of its human resources; and for the economic and social betterment of its people.

To this end the Commission, working in consultation with the Ministries of Government and Statutory Boards and, where necessary, with the private sector of the economy, shall

- (a) assess the human and material resources of the country;
- (b) set up mutually consistent quantitative targets in both

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<sup>33</sup>The persons selected are: (a) the Permanent Secretary to the Prime Minister and the Secretary to the Cabinet, (b) the General Manager of the Industrial Development Corporation.

the economic and social fields and propose, where necessary, measures to achieve such targets.

4. The Commission shall be responsible for the evaluation of the progress of plans.

To this end the Commission shall:

- (a) review all public sector projects from their inception to their completion through a system of project reports drawn up along such lines as shall be established by the Commission;
  - (b) undertake on a continuing basis the evaluation of the economic and social progress of the country.
5. The Commission shall approve any Development Plan prepared under the provisions of the Town and Country Planning Ordinance before any such Plan is submitted to Parliament and, pending the preparation of such a Plan, any major proposals involving land use or physical planning before such proposals are adopted.
  6. The Commission shall advise Cabinet on such economic, social, financial or other problems relating to national planning and the execution of the Plan as may be referred to it from time to time.
  7. All Ministries of Government and Statutory Boards shall be required to assist the Commission by providing it with such information as it may need in order to discharge its duties.

In the light of this evidence it is difficult to appreciate the conclusion, in the Draft Second Five Year Plan, that "the White Paper reflects the concern of government with planning techniques and organisation as a means of furthering the economic and social development of the country."<sup>34</sup> The conspicuous exclusion of the Chief Town Planning Officer and the Director of Community Development from membership of the National Planning Commission belies that claim for it is indicative of a failure

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<sup>34</sup> National Planning Commission, Draft Second Five-Year Plan, 1964-1968 (Trinidad and Tobago: The Government Printer, 1963), p. 11.

to integrate the economic, social and physical aspects of the planning process.

#### The Background

The density of population in Trinidad and Tobago at the 1960 census was 418 persons per square mile. Table III compares this density of population with that in some other countries.

TABLE III

Country	Density
The Netherlands	929
Belgium	783
Puerto Rico	684
Great Britain	563
Trinidad and Tobago	418
Jamaica	373
United States of America	50

Source: Information Please Almanac Atlas and Yearbook, 1964, Simon and Schuster, New York.

It is not without significance that among the countries where national land use planning is most extensively practiced at present are the island and land-locked territories such as, Puerto Rico, Ceylon, Great Britain and Israel. In all these instances land is scarce, and

competition for space among the innumerable human activities is most intense.

To further emphasize the nature of the problem and the corresponding need for planning an examination of the implications of the population statistics is appropriate. Table IV analyzes the growth of population for census periods 1851-1960. The annual rate of growth for the last inter-censal period was 2.87 percent, and is among the highest experienced in the world. A comparison with the recent inter-censal rates with some other countries is indeed revealing. In the U.S.A. it was 1.6 percent, the United Kingdom 0.5 percent, India 2.2 percent. Should the annual rate for this last period be the average for the future (and this is itself lower than the most recent rates of growth) the population of 7 million will be achieved in 80 years.<sup>35</sup> Or for a less distant time, the present growth rate would lead to a doubling of the population in 22 years, so that a population of one and a half million would be exceeded by the year 1982 and by the end of the present century in the year 2000 the population would have reached two and a half million.<sup>36</sup>

The implications, of this projected growth, for planning are immense. Tables II and IIA contained a projection to 1970 and 1980 of the urban population, which reveals that the urban population, would

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<sup>35</sup> Jack Harewood, "Population Growth in Trinidad and Tobago in the Twentieth Century," *Social and Economic Studies*, Vol. 12, No. 1, March, 1963.

<sup>36</sup> ibid.

TABLE IV  
GROWTH OF POPULATION FOR CENSUS PERIODS 1851-1960

Inter-censal Period	No. of Years in Interval	Total Popula- tion at End of Interval	Total Growth	Annual Rate of Growth (per cent)
1851-1861	10	99,848	16,870	1.87
1861-1871	10	126,692	26,844	2.41
1871-1881	10	171,179	44,487	3.06
1881-1891	10	218,381	47,202	2.46
1891-1901	10	273,899	55,518	2.29
1901-1911	10	333,552	59,653	1.99
1911-1921	10	365,913	32,361	0.92
1921-1931	10	412,783	46,870	1.21
1931-1946	15	557,970	145,187	2.03
1946-1960	14	827,957	269,987	2.87

Source: Jack Harewood, Population Growth of Trinidad and Tobago in the Twentieth Century, Social and Economic Studies, Table 1, p. 1.

double itself by 1970 and again by 1980.<sup>37</sup> This experience is borne out by the other West Indian Territories.<sup>38</sup> In Puerto Rico, for instance, where the problems are similar, save for the fact that migration has kept the growth rate in check, during the last decade 94.8 percent of the growth was absorbed by the San Juan region. The implication for Port of Spain is obvious.

One of the experts, who presented a paper at the Study Conference, on Economic Development in Underdeveloped Countries, held at the University of the West Indies, reviewed this problem thus,

This drift has several causes, it is partly due to relief--in the underdeveloped world we are now kinder to the unemployed than we used to be fifty or one hundred years ago; more provision is made for the unemployed in these towns. It is partly due to the fact that development as is taking place in these towns itself provides better opportunities for casual employment so that these towns are developing a great number of hangers on, who work for one day a week, or two days a week carry your bag and so on. It is partly due to an awakening in the countryside. Education is spreading into the countryside, and the modern world is reaching the countryside in all sorts of ways. People in the countryside are becoming dissatisfied, seeking adventure, drifting into these vast towns of which they hear. And it is also partly due to the growing wage gap itself, which by raising the level of those who have employment in the towns, attracts more and more people to come into these towns.<sup>39</sup>

The Conference on Town and Country Development Planning in the Caribbean examined this problem and:

...considered that the main reasons for rural to urban migration are ...the hope of better amenities, stability of employment, and

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<sup>37</sup>This contention is supported by Table IIa.

<sup>38</sup>W. Arthur Lewis, "Employment Policy in an Underdeveloped Area," *Social and Economic Studies*, Vol. 7, No. 3, September, 1958, pp. 43-44.

<sup>39</sup>Ibid.

higher levels of living in the cities. The conference appreciated, however, that there are in addition to these economic and social factors, deep seated psychological reasons (e.g. prestige of city life) for rural urban migration.

The conference was conscious of the fact that the problem offers no easy solution, and that migration must be dealt with in the general context of development planning...

The major issue in the Caribbean area is consequently not a question of stopping the movement of people from rural to urban areas but of attempting to guide this movement within the framework of positive economic development. The problem is to bridge the gap between the pace of urban growth and the pace of industrialization and development of the non-agricultural sectors of the economy.<sup>40</sup>

There is, in Trinidad and Tobago, another peculiar and significant cause for this rural push and urban pull. The strategic importance of this country during World War II resulted in the establishment of large military bases in the territory. This created a keen demand for local workers in all sectors (the service sector in particular) at unprecedentedly high rates of remuneration. A circumstance which gravely disturbed the established pattern of economic life in the rural areas and created "a revolution of rising expectation."

This phenomenon has had a destructive effect on the urban pattern in the two urban centers in the country. It has produced overcrowding, blight, destruction of amenities, problems of inadequate communications, increasing traffic and congestion in the already built up areas, on one hand, and meaningless and chaotic sprawl and substandard development in new areas on the other. As this uncontrolled growth occurs, urbanization

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<sup>40</sup> Report of the Conference on Town and Country Development Planning in the Caribbean (Port of Spain: The Caribbean Commission, 1956), p. 16.



encroaches on agricultural land in some instances forcing cultivation in north West Trinidad to be driven higher and higher up the steep slopes of the Northern Range. This creates a problem of storm water drainage, as indicated by the flood in the Diego Martin-Petit Valley area in 1961. Concomitant with these problems, is the shortage and overcrowding of housing units in the urban areas. The rural-urban migration has also contributed to or resulted in the spread of squatting and the appearance of shanty towns in a number of areas on the periphery of Port of Spain and San Fernando.

Because of the immense problem of overcrowding and slum clearance in urban areas the government of Trinidad intervened in the housing field under the Slum Clearance and Housing Act of 1938, and ever since then has proceeded to demolish and construct without any comprehensive plan or study of the impact or implications of the project.

In the foreward to the Draft Second Five Year Plan, the Prime Minister, Dr. Eric Williams, wrote:

...the rapid increase of population is aggravated by the automation revolution. As the country has sought belatedly to free itself from the shackles of Mercantilism and to catch up with the first Industrial Revolution in the world, it has found itself inevitably in the tolls of the second Industrial Revolution; and, the industrial programme designed to provide more jobs and skills for a population condemned under colonialism to an agricultural economy, has proceeded side by side with the redundancy of more and more workers in the basic industries of oil and sugar. The steady increase in the population and the relentless pressure of young people entering the labour market make it more and more necessary for the Government to take the initiative in providing or facilitating more and more jobs.<sup>41</sup>

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<sup>41</sup> National Planning Commission, *op. cit.*, p. v.

Fig. 1 indicates the age distribution of the population in 1960. The fact that 45 percent of the population is under 15 emphasizes the need for accelerating the employment opportunities in the territory.

At the beginning of its first term in office in 1956, the government created the Industrial Development Corporation to administer and promote its industrialization program. The Corporation has since embarked on the establishment of industrial estates on a nationwide basis. However coordination between the National Housing Authority and the Corporation is absent. A comprehensive plan is missing. "The bridge is nonexistent."

In a memorandum to the thirteenth session of the Social Commission, the Secretary-General of the United Nations pointed out:

It is recognized that problems of urbanization are now universal, even though their origins and the current needs and emphases may differ from one country to another. An industrialized country, for example, may be particularly concerned with problems of urban renewal and metropolitan congestion, while a less developed country may be especially concerned with questions associated with mass migration of unskilled labour from the rural areas. In both developed and under-developed countries, however, a need is apparent for a national policy to deal with the problems of urbanization, whether they relate to existing urban areas or to the development of new ones. While recognizing that much is being done to deal with urban problems, particularly at the city level, these are not generally viewed in the perspective of over-all national economic and social development. Even programmes at the municipal level often do not take account of fringe settlements, or of the marginal groups which may be located in or near the urban centre, but are not covered by existing services. A policy for the development of smaller towns or cities in relation to the larger centres and to the total economy is generally lacking.<sup>42</sup>

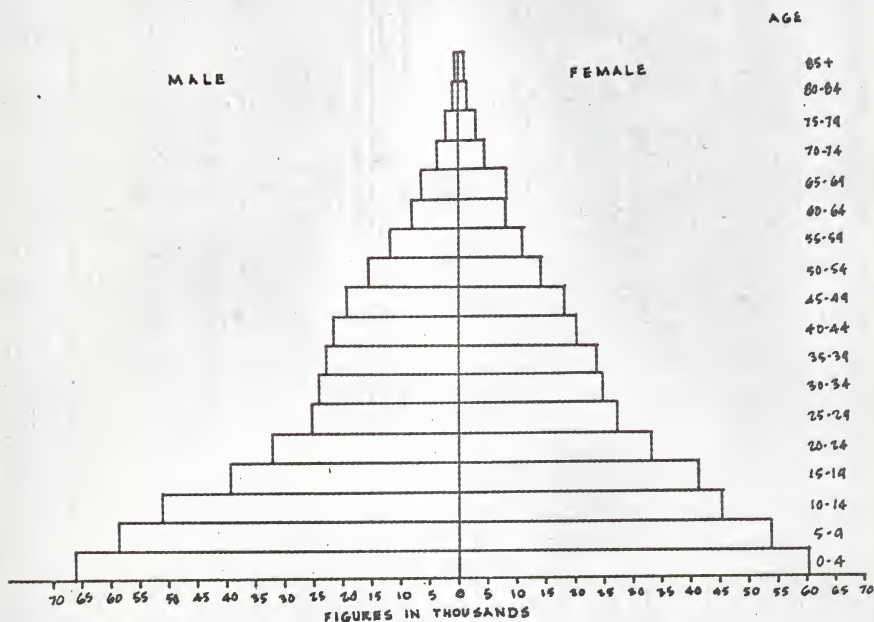
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<sup>42</sup>Secretary General, "Proposals for Concerted international action in the field of Urbanization" (New York: United Nations), E/CN.5/351, 14 February 1961, p. 3.



1960 POPULATION - TRINIDAD AND TOBAGO - BY AGE GROUP

Fig. 1



1960 POPULATION - TRINIDAD AND TOBAGO - BY AGE GROUP

Fig. 1

In effect the Government of Trinidad and Tobago has failed to appreciate the role of urbanization in economic growth. It has failed to ask and answer the following questions:

What ratio of urban and rural population and what pattern of distribution of urban population among cities of various sizes would be most advantageous from social and economic points of view in the circumstances of the country? Do the cities have the capacity to absorb increases of population at the rates being experienced at present or foreseeable for the future? Can the national economy afford investments in urban industries and facilities required to absorb such population increases in the cities? What is the effect of investments in urban industrial expansion, housing construction, and other urban development on the population trend?...<sup>43</sup>

An editorial in a local newspaper expressed the following viewpoint on the problem:

It is ridiculous that, in Trinidad today, good agricultural land can be converted at will to housing development, because people find this more profitable due to the high price of land. A [national] planning commission can save the country and prohibit such wastage of land, which only makes the country have to spend more on imported food.

Proper planning of roads, too can aid both agriculture and industry, and make sure that local industry (in its strict sense) is developed in the centres of population, rather than let it gravitate in the major only (i.e., to Port of Spain).

Competition is too fierce in the world today to set back and hope that things will take care of themselves.<sup>44</sup>

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<sup>43</sup> United Nations Bureau of Social Affairs, Implications of population trends for planning Urban Development and Housing Programmes in Ecafe Countries (paper submitted to Asian Population Conference, 1963).

<sup>44</sup> The Evening News, March 25, 1963, p. 8.

## CHAPTER III

### THE NEED FOR INTEGRATED PLANNING

#### The Existing Deficiency

Many of the developing nations have set up national economic planning machinery, for guiding the growth of their economies. However, the national development policies and programs produced by these agencies do not fully recognize, in the first place, the spatial and locational aspects of economic growth, and secondly consideration of the social consequences and implications of economic growth for urbanization receive scant, if any, attention.

Haar, Higgins and Rodwin indict the economic planners thus:

...they have neglected the crucial questions of rural versus urban growth, the distribution of new enterprises among cities, small towns and villages, and the selection of growing points and leading sectors, which are at the very core of economic development.<sup>45</sup>

Rodwin in another monograph inflicts the following strictures:

Most developing countries now have some sort of economic policy or planning mechanism for promoting growth. Such agencies generally define economic goals, evaluate the available resources and economic opportunities, and suggest appropriate policies--fiscal, monetary, budgetary, exchange, development, etc. For the most part the analyses are aggregative and are formulated in terms of trends and requirements of output,

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<sup>45</sup>Charles Haar, Benjamin Higgins and Lloyd Rodwin, "Economic and Physical Planning: Coordination in Developing Areas," Journal of the American Institute of Planners, Vol. 24, 1958, p. 168.

employment, income, savings, investment, etc. On occasion there may be location tags attached to plans for specific capital investments such as roads, multipurpose valley programs, resettlement projects, harbor installations, and irrigation schemes. On the other hand, location analysis is usually slighted or at least discussively touched on...."<sup>46</sup> He goes on to attribute the deficiency to the fact that "economic development plans concentrate upon capital rise. They do not as a rule include a plan for land use as such."<sup>47</sup>

The Trinidad and Tobago Draft Second Five Year Plan, like the plans of such countries as Indonesia, the Philippines, India, Mexico and Turkey,<sup>48</sup> gives little attention to where growth should occur. Questions as to what scale or pattern of urbanization and regional development would best promote the economic and social objectives receive little, if any, attention.

#### The Causes of the Deficiency

This deficiency is the result of two factors. It can be attributed partly to a failure on the part of the developing countries to create the dynamic planning structure needed to solve these problems and partly to the gulf between physical and economic planning.

A review of the past shows that cities have grown in response

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<sup>46</sup> Lloyd Rodwin, "Metropolitan Policy for Developing Areas," The Future Metropolis (New York: George Brazzeller, 1961), p. 179.

<sup>47</sup> Haar, Higgins and Rodwin, op. cit., p. 167.

<sup>48</sup> Rodwin, op. cit., p. 180.

to a variety of economic and political motives. They have grown largely in the free play of the market; in the economically developed nations of the world they have performed effectively, if not efficiently as foci of economic and social growth. The fact that economic growth proceeded despite social exploitation and economic waste, reflects the difference in circumstances between "developing countries" today and those of a century or two ago. Space for population expansion, resources available for development and colonies for exploitation permitted the industrialized nations to pay--and continue to pay--a high real economic price for the inefficiency and inconvenience of many of their cities.

However, as laissez faire growth proceeded, concentrating economic activities and populations into larger and larger agglomerations such as London, New York, Chicago, etc., it is being increasingly realized that what is apparently sound economics from the point of view of each individual operator may not be so sound from the standpoint of society as a whole. This realization of the inevitable conflict between private and social interests has led in most countries to the advocacy of social action in the interest of improving the functional and environmental efficiency of settlement patterns. Social action in this field came rather late in the process of economic growth of the developed nations.

Today, in the light of modern communications, modern value systems and available resources--to single out three of the main influences--can the developing nations of the world afford these costs? More immediately can they afford the consequences of ignoring them?

Developing nations can profit from the examples and errors of the past, but they must be constantly aware that the social and economic



conditions which they face today, are different from those which confronted the countries that experienced the industrial revolution earlier. In those days the disparity between economic resources and population pressure was less acute; space for population expansion was abundant.

The observations of Catherine Bauer in this regard are most apropos:

It is sometimes assumed that the general principles for urban planning and improvement are universal, equally applicable to London and Tokyo, Bombay and San Francisco. But this seeming similarity between the metropolitan problems of advanced and developing countries can be highly misleading. For the dynamics of 20th century urban development in Asia [and the developing world] is quite different in many respects from that in Asia or North America. Fundamental distinctions in time and place, as well as in degree of industrialization, all tend to affect the whole process, including the nature of the problems and the method of attacking them.<sup>49</sup>

In respect of the gulf between physical and economic planning Rodwin states,

Development economists function in a different sphere of government, use esoteric language, utilize different methods of analysis, and in general distrust "do-gooders," a class in which they place city and regional planners. In developing countries the instinctive reaction of the economist to the city planner is to wonder whether the economy can afford the luxury of the "city beautiful" or whatever other frills he imagines the city planner is contemplating. The latter, on the other hand, is not infrequently full of scorn for the economist for limiting himself to the conventional national aggregates and for misapplying textbook principles, without any real understanding of the effects of his decisions on urban and regional possibilities.<sup>50</sup>

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<sup>49</sup> Desai and Bose, op. cit., p. 8.

<sup>50</sup> Rodwin, op. cit., p. 180.

### The Need for Action

However, the applications of the lessons of the developed nations is, at least in theory, facilitated by the fact that they are undertaking economic development through the agency of national planning.

Weissman observed that:

...the recognized purpose of national development is the improvement of man's level of living. At the same time experience shows that social progress is not an inevitable consequence of economic development. As did the nineteenth century industrial revolution in Europe and North America, so does the current industrialization encourage the age old process of rural/urban migration which tends to produce social maladjustment and a stubborn malignancy of slums and blight in cities old and new.

Never the less the social setting in which the development process starts, and the resulting social and cultural changes are seldom considered at the outset of a development programme. But unless this setting as well as the changes in the physical environment are anticipated and planned for the full measure of social gain may never materialize at all and economic goals may themselves be highly jeopardized.<sup>51</sup>

However, quite fortunately Trinidad and Tobago, like most of the other developing countries, have an advantage in coming late in the process of industrialization and urbanization. This provides the opportunity for regulating the course of the industrialization-urbanization process so as to avoid the costly mistakes of the industrialized nations and to pay due attention to the goal of maximizing of social benefit.

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<sup>51</sup> Ernest Weissmann, Report of Town and Country Development Planning in the Caribbean, Caribbean Commission, Trinidad, 1956, Appendix VI.

### The Case for Integrated Planning

In theory there can be as many types of planning as there are activities to be planned. They can, however, be encompassed under the umbrella of three headings: economic, social, and physical. In economic planning the emphasis is placed on the achievement of a balance between resources and needs, while social planning emphasizes the benefits of the individual, his family and the community. Physical planning, on the other hand is concerned with the optimum use of land, within the ambit of national policy and resources.

Although in developing countries economic planning has the first call on government attention, it was noted that economic planning cannot by itself satisfy the goals of comprehensive planning ...

...the physical as well as the social consequences must be considered simultaneously with the economy in the formulation of integrated plans. Otherwise, the social consequences of the development may not only counteract the social but may also cause serious diseconomies.<sup>52</sup>

The conference on Town and Country Development Planning in the Caribbean reviewed this problem and found that

...economic and social development programmes undertaken without consideration of their related physical aspects can lead to disorderly patterns which are harmful to the economic objectives as well as undesirable from a social point of view.<sup>53</sup>

It recommended that: "There should be complete integration in the

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<sup>52</sup>Alvin Mayne (Ed.), Proceedings of the Seminar on the Contribution of Physical Planning to Social and Economic Development in a Regional Framework, Puerto Rico, Puerto Rico Planning Board, 1960, p. 304.

<sup>53</sup>Report of Conference on Town and Country Development Planning in the Caribbean, op. cit., p. 11.

planning process between physical, economic and social sectors from the earliest stage and at the highest policy making level."<sup>54</sup>

This recommendation is in concurrence with the recent opinion of a group of experts that:

...in view of the importance of integrating physical planning with economic and social factors of development, physical planning should be considered along with economic and social planning as integral parts of national planning. Such integration should be carried out at the national, regional and local levels to ensure coordination of plans and actions.<sup>55</sup>

These arguments constitute the case for economic, social and physical planning in Trinidad and Tobago in particular, and the developing nations in general to be considered as an integral part of a single but many sided process.<sup>56</sup>

#### The Status Quo in Trinidad and Tobago

In January, 1963 Government established a National Planning Commission "as the supreme planning body under the cabinet."<sup>57</sup> The membership of the commission comprised the following, the Prime Minister, Chairman, the Minister of Finance, Deputy Chairman, the minister or ministers responsible for Agriculture, Industry and Petroleum, the

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<sup>54</sup> Ibid.

<sup>55</sup> Report of Ad Hoc Group of Experts on Housing and Urban Development, United Nations, New York, 1962, p. 22.

<sup>56</sup> Ernest Weismann, "The Problems of Urbanism in the Less Industrialized Countries," a paper delivered at the Conference on Urban Planning and Development at the Ford Foundation, October, 1956.

<sup>57</sup> National Planning Commission, op. cit., p. 18.

minister of Labour, the Director of Statistical Services, a representative of the Central Bank, two additional persons to be selected by the Prime Minister on the basis of individual competence,<sup>58</sup> and the head of the Economic Planning Division, office of the Premier, Secretary/Member. The Economic Planning Division of the Prime Minister's office was designated as the secretariat of the Commission. Omission of the Chief Town Planning Officer Minister of Community Development and Local Government is ample evidence of a failure to conceptualize planning as a comprehensive process, involving both horizontal--economic, social and physical--and vertical--national, regional and local integration.

The type of planning framework envisaged is indicated by the following excerpts in the Plan:

...close links have been established between the Economic Planning Division and the Town and Country Planning Division, both are responsible to the Prime Minister as the Minister responsible for planning and development....<sup>59</sup>

It is fortunate that a start is being made on the preparation of the Physical Development Plan during the year when the new economic and social plan is being prepared. The physical Development Plan will provide a basis for regulating the use of land in the national interest....

The fact is that comprehensive town and country planning is a stark necessity in view of our rapid increasing population, our increasing degree of urbanization and our limited resources of land.<sup>60</sup>

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<sup>58</sup>The persons presently selected are (1) the Permanent Secretary to the Prime Minister and Secretary to the cabinet, (2) the General Manager, Industrial Development Corporation.

<sup>59</sup>Ibid., p. 20.

<sup>60</sup>Ibid., p. 18.

These statements are couched in language which distinguishes the physical development plan as a thing apart. In this context, it is pertinent to observe that a physical development framework accompanied Ghana's recent Seven Year Plan, and may be regarded as its geographic application.

This loose relationship between the several parts of this single but many sided process, was condemned in the following terms by the experts at the symposium on the Planning and Development of New Towns.

Unless physical planning concepts and processes are effectively integrated with economic planning concepts and processes, it might not be possible to ensure the provision of a minimum desirable physical environment for human needs and welfare. Simple coordination of physical planning with economic and social planning will not achieve the desired objective. New planning techniques have to be evolved within this integrated framework. A multi-disciplinary approach will be necessary incorporating economics and social science, architecture, engineering, city and regional planning and other related disciplines.<sup>61</sup>

The following spirit expressed in the Pilot Draft of the Twentieth Development plan for Puerto Rico should be the guiding principle of the planning process in Trinidad and Tobago.

While the economic goals will be considered on par with the social and political goals, it is recognized that their primary function is to assist in the achievement of the ultimate social and political goals.<sup>62</sup>

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<sup>61</sup> Report of the Symposium on Planning and Development of New Towns, held in Moscow, August-September, 1964 (United Nations).

<sup>62</sup> Puerto Rico Planning Board, Pilot Draft Twentieth Development Plan, Fiscal Years 1964-1967, Commonwealth of Puerto Rico, Office of the Governor, Vol. 1, p. 2.

## Recommendations

The following proposals are submitted for the reorganization of the planning structure.

1. The Economic Planning Division and the Town and Country Planning Division in Office of the Prime Minister should be replaced by a single unit, a Bureau of Integrated Planning.
2. The Bureau of Integrated Planning should have a Director of Integrated Planning at the helm.
3. The Bureau of Integrated Planning should have four divisions: (1) the Economic Planning Division, (2) the Social Planning Division, (3) the Physical Planning Division, and (4) the Projects Review Division.
4. The Director of Integrated Planning should be secretary/member of the National Planning Commission.
5. The minister or ministers responsible for Local Government, Community Development and Social Services be a member/members of the national Planning Commission.
6. The territory should be divided into planning regions by the National Planning Commission on the advice of the Director of Integrated Planning.
7. The Structure of Local Government should be examined by an expert, with special emphasis on the procedure and qualifications for incorporation of settlements.

## CHAPTER IV

### AGRICULTURE VERSUS URBAN GROWTH

#### The Dilemma

The settlement pattern both in Trinidad and in Tobago is the result of an hierarchy of central places which sprung up to serve the agricultural hinterland. The rise of the petroleum industry in south Trinidad resulted in the emergence of some mining towns, which because of their specialized function occupy greater prominence than they would normally. The high order towns (central places) are located along the main highways.

The growth process which resulted in the Port of Spain conurbation consisted of three main phases. First the city grew on the fringes, next linear growth along the highway to Arima took place, and finally it extended its tentacles westward and layed claim to the agricultural lands in that area. Because of the origins of the settlement pattern it is inevitable that as urbanization extends agriculture will be displaced.

Throughout the world the many of the main issues underlying the process of physical planning arise from the interplay of the influence of soil, climate and population. Trinidad and Tobago is no exception to this principle, in common with countries of high population density the issues are magnified here, as one attempts to allocate scarce resources in land among competing uses.

In the post World War II period when concurrent with the rising standard of living, the forces of urban expansion attained the greatest



momentum in the history of the territory. During this period urban dwellers became amenity oriented and sought the cooler and more scenic valleys west of Port of Spain. Thus the Diego Martin Valley which contains some of the most fertile soil in the territory was lost to agriculture.

A similar situation exists in the state of California, in the United States, where the lure of a mild climate was recognized by Ullman as a major factor in the massive population increase,<sup>63</sup> and wherein like manner the loss of prime orchard land to the forces of urbanization, in a low density country, is a source of such serious concern that several monographs on the subject have appeared.<sup>64</sup>

At present, in Trinidad, agriculture in the Santa Cruz and Maracas valleys stands in jeopardy before the altar of urbanization. Developers, speculators and in some instances the owners of large plantations have begun to plat land in these areas. This phenomenon, urban erosion of prime agricultural land, has stimulated reaction from the press<sup>65</sup> and community leaders, which has mainly taken the form of

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<sup>63</sup> Edward Ullman, "Amenities as a Factor in Regional Growth," Geographical Review, January, 1954, pp. 119-132.

<sup>64</sup> United States Department of Agriculture, "Rural Zoning in the United States," Agricultural Information Bulletin No. 59; Agricultural Extension Service, "Agricultural Zoning Makes Sense," University of California, San Mateo, 1954; News release issued through the facilities of the United States Department of Agriculture, October 9, 1956; Howard F. Gregor, "Urban Pressures on California Land," Land Economics, Vol. 33, No. 4, November, 1957; "Urban Pressures on California Land: A Rejoinder," Land Economics, Vol. 34, No. 1, January, 1950.

<sup>65</sup> Evening News. Loc. cit.

pleas for the introduction of exclusive agricultural zoning as a protective measure.

#### The Rationale for Action

Stevens, at the Conference on Town and Country Development Planning in the Caribbean, observed that, in "any development programme, the fundamental arm of government should be the provision for the right use of land the platform of all human activity."<sup>66</sup> This statement is of great moment because land is probably the only resource which cannot be transported or imported.

Without any form of land control, the use, to which a piece of land is put is finally decided by the price which is offered for it. In this circumstance, the use or interest which needs land in large amounts, because it uses it extensively, is bound to lose in the competition for land with other interests. Thus if there is free competition for land between agriculture and in particular urban development, then agriculture, paying the lowest price will always have to take what remains.<sup>67</sup>

Pigou justifies social action in such situations thus:

...it is the clear duty of government, which is the trustee for unborn generations as well as for its present citizens to watch over, and if need be, by legislative enforcement, to defend the exhaustible natural resources of the country from rash and reckless exploitation.<sup>68</sup>

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<sup>66</sup> Peter H. M. Stevens, "Planning Legislation in the British West Indies," a paper delivered at the Conference of Town and Country Development Planning in the Caribbean, Caribbean Commission, P.O.S. Trinidad, November, 1956.

<sup>67</sup> G. P. Wiberly, Agriculture and Urban Growth (London: Michael Joseph, 1959), p. 23.

<sup>68</sup> A. C. Pigou, The Economics of Welfare (London: Macmillan and Co., 1920), p. 67.

Furthermore it, is worthwhile to bear in mind the fact that "the essence of planning is to impose immediate costs and sacrifices in the interest of securing greater benefits at a later date."<sup>69</sup> In the light of the foregoing the arguments for protecting agricultural land need to be carefully examined because they have a strong effect on planning decisions.

The arguments of substance in this issue are not those nostalgic romanticisms based on Goldsmith's lines:

A bold pesantry, then country's pride,  
When once destroyed, can never be supplied.

On the contrary they are those rooted in economics.

#### The Economic Case for Exclusive Agricultural Zoning

To most economic writers and students of economics, and more so to journalists and other moulders of public opinion clamoring for economic development in the underdeveloped world in the early post World War II period, development was synonymous with industrialization. It also meant, by implication if not explicitly, the relegation of the agricultural sector in the economy to a minor position and the direction of effort and resources largely to industry.

Today there is, to say the least, serious doubt concerning the near complete identification of economic development with large scale industry, in spite of the great emphasis still placed on the evolving

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<sup>69</sup> Peter Self, Cities in Flood (London: Faber and Faber, Ltd., 1961), p. 169.

of manufacturing industry. The concept of "balanced growth" is now accepted, and agriculture is conceded a role in the development process. Furthermore, backward linkage effects have been recognized, where industrialization has in some instances proven to be a powerful stimulus to the development of agriculture.<sup>70</sup>

Johnson and Mellor summarize agriculture's contribution to economic development in the following five propositions:

(1) Economic development is characterized by a substantial increase in the demand for agricultural products, and failure to expand food supplies in pace with the growth of demand can seriously impede economic growth. (2) Expansion of exports of agricultural products may be one of the most promising means of increasing income and foreign exchange earnings, particularly in the early stages of development. (3) The labor force for manufacturing and other expanding sectors of the economy must be drawn mainly from agriculture. (4) Agriculture, as the dominant sector of an under-developed economy, can and should make a net contribution to the capital required for overhead investment and expansion of secondary industry. (5) Rising net cash incomes of the farm population may be important as a stimulus to industrial expansion.<sup>71</sup>

Moreover the Draft Five Year Plan accords a role to agriculture in its strategy of development. It states:

A dominant objective of our policy must therefore be to reduce the share of imports in total food consumption in order to achieve a greater degree of self-sufficiency, and to protect the balance of payments....There is no real conflict between the goals of promoting domestic agriculture and encouraging export agriculture. Increased production in both sectors strengthens the foreign balance....increased production in export agriculture should come

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<sup>70</sup> Albert O. Hirschman, *The Strategy of Economic Development* (New Haven: Yale University Press, 1958), p. 112.

<sup>71</sup> Bruce F. Johnson and John W. Mellor, "The Role of Agriculture in Economic Development," *American Economic Review*, Vol. LI, No. 4, September, 1961, pp. 571-572.

from increases in yields from existing acreage, rather than from extended acreages.<sup>72</sup>

Backward linkages are also envisaged. "The new agricultural programme will also rely on a closer link between Agriculture and Industry in order to widen the market for domestic agriculture by means of the local processing of such products."<sup>73</sup> In addition, the Plan sees the long run economic survival of the country as depending on its ability to transform its economic structure so as to lessen its dependence on petroleum extraction. Growth in the agricultural sector which now only contributes about 7 percent of the gross Domestic Product is one of the projected factors in the transformation.<sup>74</sup>

In the light of the place accorded to agriculture in the plan and the scarce resources in suitable land exclusive agricultural zoning on the basis of the Land Capability Map in preparation is justified as a tool not to prevent urban development but to steer and compress it.

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<sup>72</sup>National Planning Commission, op. cit., pp. 173-175.

<sup>73</sup>Ibid., p. 176.

<sup>74</sup>Ibid., p. 64.

## CHAPTER V

### URBAN DECENTRALIZATION IN SELECTED COUNTRIES

#### Introduction

In Europe and in North America industrialization and urbanization have been going on for over a century. Laissez-faire was the order of the day; hence when planning was accepted it functioned at the local level. In 1946, with the enactment of the New Towns Act by Parliament, Britain developed, "for the first time in contemporary western history, a national policy for urban development."<sup>75</sup> It should, however, be noted that Russia built 800 new towns--260 of which were developed on virgin territory--since the revolution. Forty million people have, so far been resettled in this effort.<sup>76</sup> Data on the details of the Soviet Programme is, unfortunately, unavailable.

No developed country, except Great Britain (and perhaps the Netherlands) has, so far, devised a systematic national policy for urban development. There is, however, evidence in these countries, of increasing concern, of recent vintage, about national patterns of physical development. The current efforts of France to curb the growth of Paris, those of Italy in relation to Rome, Japan's in relation to Tokyo and

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<sup>75</sup>Lloyd Rodwin, "Economic Problems in Developing New Towns and Expanded Towns," Background Paper No. 4, Round Table Conference on the Planning and Development of New Towns, Moscow, September, 1964, p. 2.

<sup>76</sup>Sir Frederic Osborn and Arnold Whittick, New Towns the Answer to Megapolis (London: Leonard Hill, 1963), p. 138.

Osaka, and in the United States, the exploration by the Federal Government, the Ford Foundation, and the University of California (Berkeley), provide ample evidence.<sup>77</sup>

It is worth observing that the British effort is directed to a problem which differs significantly from that which the developing countries face. Britain on one hand is seeking to redistribute an existing urban population crowded in central areas. The developing countries on the other hand are seeking to adequately accommodate the great flood of migrants from rural communities in search of their initial experience in an urban industrial world. They are thus confronted with additional, built-in problems: the provision of urban dwellings, the orientation of the migrants into urban life, and the establishment of an industrial economic base. In spite of this inherent difference, there is, however, in the British experience much that is germane to the solution of the problems in the developing countries in general, and Trinidad and Tobago in particular.

"National Planning for the Redistribution of Population and for the Building of New Towns," was the subject of discussion under Theme II of the 27th World Congress for Housing and Planning, held in Jerusalem, under the sponsorship of The International Federation for Housing and Planning.

Appendix A contains the official summary of the reports of 15 countries. It is unfortunate for the scope of this discussion that Israel and Malaya are the only two emerging nations included. However

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<sup>77</sup>Lloyd Rodwin, *op. cit.*, p. 9.

this does not detract from its relevance.

In addition, it is proposed to examine urban development in Britain, Israel, India, Ghana, and Puerto Rico.

#### Britain

In 1937 a Royal Commission was appointed, under the chairmanship of Sir Montague Barlow, to inquire into the distribution of the industrial population, and the social, economic, and strategic disadvantages arising from the concentration of industry and working people in large built-up communities. The Commission's report, published in 1940 endorsed a planned attack and recommended the following aims:

- (a) the directing of the establishment of industries;
- (b) ensuring, in so doing, a balanced distribution of industrial employment; and
- (c) preventing a further growth of congested areas such as London.

The destruction wrought during World War II underlined the need for a post war reconstruction policy. Hence the Reith Committee was appointed in October, 1945, "to consider the general questions of the establishment, development, organisation and administration that will arise in promotion of a policy of planned decentralization from congested urban areas."

The post war Labor Government accepted the major recommendations of the Reith Committee and in 1946 with the qualified approval of the Conservative opposition passed the New Towns Act. Between 1946 and 1962 a total of 15 towns were initiated. Eight are in the London area:



Stevenage, Harlow, Hemel Hemstead, Welwyn Garden City, Hatfield, Bracknell, Crawley, Basildon, and the others are located in other parts of Britain: Cwmbran in Wales, East Kilbride, New Cumbernauld and Glenrothes in Scotland, Peterlee and Newton Aycliffe in the Northeast, Corby in the midlands.<sup>78</sup>

Not all the towns are new towns. Hemel Hemstead expanded an ancient borough of 20,000 persons. Welwyn Garden City, one of Ebenezer Howard's original demonstration projects was converted into a New Town to accommodate the industrial expansion anticipated in that region. Stevenage started with a population of 5,000 persons, many of whom initially objected to the transformation of the community. But most of the towns were intended to serve the function of decentralizing London. Other functions of the new towns developed later, as the Barlow report was gradually implemented. Thus, this device became an instrument in both redistribution of population from congested central areas and regional development<sup>79</sup> (eg. Peterlee in Northeast England).

The new towns were conceived, in the tradition of Howard's Garden Cities,<sup>80</sup> as self contained communities with all facilities that make up an independent environment. They were not intended to be satellite dormitories of the central city.

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<sup>78</sup> Lloyd Rodwin, *ibid.*, p. 3.

<sup>79</sup> F. J. J. H. M. Van OS, Economic Basis of Urban Development, Working Paper No. 3, Seminar on Urban Development Policy and Planning, 1962, SEM/URB/POC/WP.2, p. 31.

<sup>80</sup> Ebenezer Howard, *Garden Cities of Tomorrow* (London: Faber and Faber Ltd., 1960).

When the Conservative Party was returned to power in 1952 they shelved the new town's concept and enacted the Town Development Act of 1952. This provided for expanded towns to absorb the overspill.

In the meantime, however, the new towns program proved to be such a success that government reversed its policy in 1962 and designated three more new towns: Dawley near Birmingham, Skelmersdale near Liverpool, and Livingston near Edinburgh. In 1963 proposals were submitted for three further new towns, at Redditch near Birmingham, at Runcorn near Liverpool, and on a site to be selected near Manchester.<sup>81</sup>

All the land of the new town is acquired by the Development Corporation hence the increment in value produced by the development accrues to that body.

It is worthy to note that in spite of the success of the new towns policy as a planning concept, it has not curbed the growth of London.

#### Israel

Israel is the country in which the principle of planned location of population and industry has been most logically pursued. Before the war far too large a percentage had been massed in three cities. Every effort is now being made to prevent their further expansion and 24 regional centres of 10,000 to 60,000, with many smaller towns and villages are included in a systematic national plan.<sup>82</sup>

Appendix B contains a copy of the report from Israel on its "National Policy for the Redistribution of Population and the Building of New

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<sup>81</sup>Rodwin, *op. cit.*, pp. 6-7.

<sup>82</sup>Osborn, *op. cit.*, p. 139.

Towns."

#### Ghana

The scope of redevelopment has been estimated to be so great for Accra and the other large centers, that government policy, in the main has taken the position that investment will be used for programs contributing directly to new production, primarily in the medium sized towns, rather than for the betterment of urban standards in the older centers. The new town of Tema, in the Volta River Project, some 17 miles from Accra is slated to become the focus of the nation's industry and commerce, leaving Accra free to fulfill the role of capital. It is anticipated that Tema and Accra will unite eventually. The plan for Tema has provided at the outset for the unified development of the metropolitan area as a whole. In keeping with the policy of urban and industrial decentralization a two-thirds increase in the population of the medium size towns is projected.

#### India

During the First Plan period, the government tackled the problems of excessive urbanization, and mounting exodus from rural areas by a policy of supporting village and small scale industries. The idea of employing industrial estates as a weapon in this struggle took concrete shape only during the closing years of the First Plan, and there was no significant progress until 1956.

However despite great effort and expenditure the establishment of new centers for industry was achieved only to a limited extent under the Second Plan. Too many industrial estates were located in or

comparatively near the bigger cities.

The establishment of industrial estates in and around the larger cities was probably inevitable during the early stages of development. Due regard had to be paid to such factors as the concentration of industries in particular towns, and the likely potentialities for their development, the availability of a variety of facilities and in many cases the response of the local entrepreneurs. Other considerations such as proximity to markets, particularly in regard to consumer industries, nearness to equipment and machinery for repairing and service workshops, availability of technical know-how and skilled workers, and essential facilities like transport, water, power influenced location.

It is proposed during the period of the Third Plan to set up about 300 additional estates of varying types and sizes, to be located as far as possible near small and medium sized towns.

#### Puerto Rico

Historically, the stagnation of the Puerto Rican economy prior to 1940 meant that any expansion in the industrial base would be desirable. No thought was given except in passing, either to where such expansion should be located or to the need for supporting social overheads. By 1951 it became clear that the industrial development was concentrating in the area of the capital San Juan. The rest of the island was receiving very little of the benefits of economic development. The rural push and urban pull were diligently at work.

During the last two decades, there had been drastic changes in the internal distribution of the island. Generally this can be explained by observing the increase which have [had] occurred in the urban areas, specially in the Metropolitan areas, and the

decrease observed in the rural areas.

The greatest increase in the urban areas took place during the 1940 to 1950 decade when the urban population increased from 30.2 per cent to 41 per cent.<sup>83</sup>

To remedy this, special incentives including among other factors infrastructure and provision of rent differentials favoring the less urbanized areas were offered to spread industrial firms out into the island--"a factory in each municipality." Problems soon arose, and in 1956, 11 areas were selected. This has since been modified to 4 or 5; and more recently in 1960 it was found that mere strengthening of the economic base could not hold the population in the smaller localities.

This single economic incentive was not sufficient unless accompanied by the provision of many other incentives such as educational, recreational and housing facilities. A number of participants concluded that the urban environment must be improved in its totality in order to create the climate for industrialization. In Puerto Rico it would appear that a new approach will have to be developed and possibly, consideration be given to total concentration of improvement efforts (massive approach) in two other metropolitan areas--Mayaguez and Ponce.<sup>84</sup>

Ramon Garcia Santiago, Chairman of the Planning Board referred the current approach thus:

Should we let the economy drift away into the future, in accordance to the same forces that operated in the past, great urban concentrations would occur, making worse those urban social evils which already exist (slum areas, juvenile delinquency, intense traffic problems, maladjustment in patterns of living, etc.). It is necessary to face these forces vigorously. To be effective, we cannot attack this tendency to concentration by offering as the only solution the alternative of a "total dispersion." Between the ideal of an economic activity fully dispersed and the concentration at the capital city, there is an

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<sup>83</sup> Puerto Rico Planning Board.

<sup>84</sup> Manne, op. cit., p. 311.

intermediate compromising position: "decentralizing of concentrations," placing these concentrations or nuclei, in adequate points throughout the island in order for each of them to propagate their generated well being to their adjoining areas or spheres of influences.<sup>85</sup>

#### Points Applicable to Trinidad and Tobago

The following points from the experiences in the countries studied are applicable to Trinidad and Tobago:

- (1) the principle of the increment in value, created by public expenditure, accruing to the state,
- (2) the investment in programs which will contribute directly to new production rather than in redevelopment,
- (3) the use of industrial estates in urban decentralization,
- (4) the significance of the failure of the "a factory in each municipality" policy in Puerto Rico and
- (5) the need for social overhead facilities in addition to the industrial economic base to curb migration to the conurbation containing the capital.

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<sup>85</sup> Ramon Garcia Santiago, "Orientation for Future Planning," a Lecture delivered at the Annual Assembly of Baptist Youth, Ponce, Puerto Rico, July, 1962.

## CHAPTER VI

### THE DEVELOPMENT OF A POLICY FOR TRINIDAD AND TOBAGO

The islands of Trinidad and Tobago are considered as a single unit in this paper, Tobago being considered a region for planning purposes. Hence, since it is the burden of this monograph to prepare a national urban development policy, Tobago will not be the subject of separate and distinct study.

Moreover, it should be pointed out that in October, 1963 in the wake of the destruction wrought in that island by hurricane Flora, the Prime Minister appointed a planning team "to formulate a broad outline of a long range rehabilitation and reconstruction programme for Tobago." The report of that team proposes a settlement pattern and hierarchy which the author after careful examination endorses.

There are, as previously observed, only two urban centers, in Trinidad and Tobago; one in the north, the Port of Spain Conurbation, and the second, in the south consisting of the urbanized area around San Fernando. In 1960 the total population of these two centers amounted to 302,300 persons or 36.5 percent of the total population of 827,957. The Port of Spain conurbation alone contained 29 percent of the total population.

On the basis of the projections in Table II (page 11) and Table IIa (page 12) the urban population can be expected to almost double itself between 1960 and 1970 and to repeat that performance in the following decennial period. This assumption is reinforced by the experience of Puerto Rico. In view of the age structure of the population--45

percent of the population is under 15 and will soon be in search of employment--the high population growth rate and the industrialization process, there is no evidence to suggest that the growth of the urban population can be in any way reversed.

The rate of urbanization is generally slow in the early phase of development; it then becomes faster, until a point is reached after which it slackens to a steady pace. Trinidad and Tobago is passing through this intermediate stage of fast growth.

Port of Spain and its environs combine the following national function:

1. Seat of government and central administration.
2. Center of social and educational institutions.
3. Center of industry (excluding oil).
4. Center of trade and commerce.
5. Center of sea, road and rail communication.

The expansion of the conurbation has been made possible by the following stimuli: (1) the employment opportunities created by the above factors, (2) it provides the largest consumer market, (3) it provides unrivaled social facilities, and (4) good communications. A vicious circle was created, employment opportunities attracted labor and service population, and industry trade and commerce were attracted by available labor, thus providing increased employment opportunities. This process was commented upon by Catherine Bauer in the following terms,

The fact that great cities are already there and have such serious economic problems "creates a tendency for further



centralization of industrial commercial and service development." More people are attracted, who create more problems, hence more pressures for additional employment, housing and services. This mounting cycle of concentration can only be broken by the establishment of powerful new magnets elsewhere, at a scale commensurate with the rate of urbanization.<sup>86</sup>

The Housing Survey conducted in 1957 revealed certain aspects of the inadequacy of the existing urban pattern.<sup>87</sup> In the incorporated area of Port of Spain 52 percent of its 20,000 accommodation units were grossly overcrowded. The corresponding figure in San Fernando was 30 percent. Furthermore in Port of Spain, as well as in San Fernando, the increasing density of population has resulted in much unauthorized construction and additions to existing buildings. In such areas as are affected by this cancer, there is no longer any orderly layout of houses. Conditions which exist are both a health and fire hazard.<sup>88</sup>

During the First Five-Year Development Programme--1958-1962, Government allocated to housing 10% of her total capital budget. ...With this she built at the highest rate in the history of the territory, but still not fast enough to make any significant improvement for the country as a whole when one considers the back log inherited and the present population growth.<sup>89</sup>

With respect to its efforts in the period covered by the First Plan the National Housing Authority stated,

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<sup>86</sup> Catherine Bauer, "The Optimum Pattern of Urbanization," E/CN.11/RP/L.16. Working Paper No. 30, United Nations Seminar on Regional Planning, Tokyo, 1958.

<sup>87</sup> Government of Trinidad and Tobago, Economic Survey 1958 (Port of Spain: The Government Printer), 1959, p. 51.

<sup>88</sup> United Nations, Special Study on Social Advancement in Non Self Governing Territories (New York: United Nations, 1962), p. 38.

<sup>89</sup> B. N. Evelyn, Chief Housing Officer, "Housing--A Great Social Problem," p. 3. National Housing Authority, June, 1963.

...in reviewing the past five years from 1958 it will be seen that some of the worst slum areas in Port of Spain and San Fernando have either been removed or are in the process of being removed....

...The removal of a considerable portion of the Mango Rose and Jackson Place slum has been achieved by the construction of two 4-Storey apartment buildings and a 9-Storey superstructure.

The clearance of this slum area and that of St. Joseph Road was made possible by the removal in stages of the displaced tenants to temporary Decanting Centres at Malick and Morvant (where the Authority has constructed 148 units for this purpose) until the multistorey buildings are erected in the areas.<sup>90</sup>

It should be noted that no mention is made of reconstruction on the basis of a comprehensive plan. Opportunities for guiding proper growth were neglected. "It was more important for politicians to excel each other in statistics of housing output than to bother where buildings went up."<sup>91</sup> The tasks of acquiring land on the necessary scale and removing badly sited factories and other buildings and establishing a better system of land use are being shirked in favor of a more piecemeal approach narrowly geared to slum clearance and rehousing.<sup>92</sup> Replanning city slums must be part of a comprehensive effort. It was not appreciated that a scattering of expensive projects, a few blocks of slum clearance count for very little in the improvement of the urban pattern.

Ernest Weissman, in the closing statement at the United Nations Regional Seminar on Housing and Community Improvement, appropriately

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<sup>90</sup>"Housing" an unpublished Memorandum of the National Housing Authority (undated).

<sup>91</sup>Self, op. cit., p. 168.

<sup>92</sup>Ibid., p. 167.

commented on this approach thus:

Because of its vital place in the social and economic environment, the housing problem has grown into a major public issue in most countries. Housing programmes are being undertaken at break neck speed without proper attention being paid to long-term consequences.<sup>93</sup>

In connection with the housing problem in urban areas the Government of Trinidad and Tobago made the following observation in the Draft Second Five Year Plan.

The shortage of housing units in the urban areas is the inevitable product of social change and social mobility. Urbanization, or the movement of population from rural to urban areas has for the past many years been exerting pressure upon available units and has contributed to or resulted in the spread of squatting and the appearance of shanty towns in a number of areas.<sup>94</sup>

In view of the deteriorating situation government intervened in the housing field both directly, and indirectly, in the form of fiscal incentives to private entrepreneurs. But, the Draft Second Five Year Plan notes:

There is a growing shortage of lots in urban areas, and in north Trinidad along the major routes. In the Diego Marten Valley, for example, present prices are ten to twelve times those prevailing in the early 1940's.<sup>95</sup>

Pitambar Pant at a Seminar on Urbanization in India made the following observation in this regard.

Utmost importance, therefore attaches to devising methods of low cost urbanization. The task has to be approached from several

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<sup>93</sup> United Nations, "United Nations Seminar on Housing and Community Improvement in Asia and the Far East," New Delhi, India. 21 January-17 February, 1954, TAA/NS/ATE/1 (New York: United Nations, 1954).

<sup>94</sup> National Planning Commission, *op. cit.*, p. 269.

<sup>95</sup> *Ibid.*, p. 270.

directions. There is need for evolving a positive urban land policy which will provide for control of land value and use and for speedy acquisition of land at low prices.<sup>96</sup>

A pre-condition for the success of any urban development policy is the adoption of measures to control speculation in land. These measures should be both fiscal, in the form of capital gains and betterment taxes, and by direct government intervention, in the form of acquisition by government of land on the outskirts of cities, as done in the case of Stockholm in Sweden and Rotterdam in Holland. The British precedent of acquiring the sites of new towns and extending this principle to town expansion schemes should be adopted. The appreciation in value created by public expenditure on development would thus accrue to the entire society and would be available to prime the pump of development.

Asoka Mehta has pointed out that

...national policies ...can provide within limits, direction to urbanization and shape the size and patterns of towns and cities. What happens, to the number, location and condition of people is not preordained, but is the result of decisions taken by the people. It is the task of policy makers to assist the people in making decisions.<sup>97</sup>

At a United Nations Seminar on Urban Development Policy and Planning it was concluded that "the goal of urban development policy is social progress through creation of optimum conditions of human welfare

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<sup>96</sup> Pitambar Pant, "Urbanization and the Long-Range Strategy of Economic Development," India's Urban Future (Berkeley and Los Angeles: University of California Press, 1962), p. 190.

<sup>97</sup> Asoka Mehta, "The Future of Indian Cities: National Issues and Goals," Ibid., p. 414.

and a relatively high standard of living."<sup>98</sup>

On the basis of these two statements a comprehensive urban development policy should relate to the economic, social, and physical (spatial) aspects...

It is proposed to accept the finding of the United Nations Urban Development seminar that the essential purpose of an urban development policy is to provide (1) measures for promoting a balanced economic and social development, and (2) measures for avoiding the uncontrolled growth of large agglomerations.<sup>99</sup>

In dealing with urban development policy the Third Five Year Plan of the Government of India states,

Urbanisation is an important aspect of the process of economic and social development and is closely connected with many other problems such as migration from villages to towns, levels of living in rural and urban areas, relative costs of providing economic and social services in towns of varying size, provision of housing for different sections of the population, provision of facilities like water supply, sanitation, transport, and power, pattern of economic development, location and dispersal of industries, civil administration, fiscal policies and the planning of land use....

...Of the aspects mentioned above, in the long run, the most decisive are the pattern of economic development and the general approach to industrial location.<sup>100</sup>

The following excerpt from the corresponding section of India's

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<sup>98</sup>United Nations European Seminar on Urban Development Policy and Planning, Warsaw, Poland, SOA/ESWP/1962/1 ST/ECE/HOU/9 (Geneva, United Nations, 1962), p. 7.

<sup>99</sup>Ibid., p. 3.

<sup>100</sup>Government of India, Planning Commission, Third Five Year Plan (New Delhi: Government of India Press, 1961), p. 689.

Second Plan puts the above quotation in brighter focus.

Unless there is adequate thought and planning, industrial progress will be accompanied by serious social and other problems in urban areas which may become increasingly difficult to manage. It is therefore necessary that from now the future course of urban development should be viewed by public authorities at the Centre ...Even though quick results may not be forthcoming appropriate policies should be laid down from the start and determined efforts made to follow them with the support of enlightened public opinion....

If planned urban development is to be undertaken and the lines along which various urban centres are to develop over the course of the next ten or fifteen years, there is need for a clear conception of the pattern of economic development and especially of industrialization which is to be followed in determining the distribution, location and size of various industrial and other undertakings.<sup>101</sup>

The task of development is to rationalize the distribution of economic activities and to obtain a compatible redistribution of population so as to minimize what has been called "space friction."

...This calls for the establishment of a functionally integrated geographical spatial or location structure in the realization of the overall communities of varying size may efficiently function in relation to the overall goal of the society.<sup>102</sup>

The United Nations Urban Development Seminar found that:

A planned development of a network of metropolitan centres, cities, towns and villages can be created only on the basis of linking the whole country together. This would require paying adequate attention to the national environment of the region as a whole and to economic and social functions of each settlement. This network could serve as an effective means of providing the people with the most effective distribution of opportunities for employment and with educational, cultural, health, social and

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<sup>101</sup> Government of India, Planning Commission, Second Five Year Plan (New Delhi: Government of India Press, 1956), p. 568.

<sup>102</sup> Desai and Bose, op. cit., p. 5.

commercial services, thereby achieving the highest possible standard of living.<sup>103</sup>

In Trinidad and Tobago, the size of the domestic market precludes the establishment of industrial centers with competing trade areas. For this reason, in addition to the other incentives mentioned earlier, it is the current practice of industry to locate within the Port of Spain conurbation within easy reach of the deep-water harbor because of the importance of the export market. On the basis of the fore-going facts, if the market forces were permitted to operate freely without Government guidance the greater part of the growth would occur within the Port of Spain region (St. George County). Only industries which seek linkages with the petroleum or sugar industry would locate elsewhere. This problem was the subject of discussion at the Jerusalem Congress. The preliminary introductory report (Appendix A) states:

In most participating countries it has been recognized that one cannot leave the "natural" forces pressing for concentration or decentralization of population, settlement and economic activities to result in solutions by blind chance. The contemporary scale of population increase, industrialization and environmental problems make it increasingly necessary for governments to formulate goals of comprehensive development and to regulate or direct the "natural forces" towards the achievement of new pattern of regional settlement. (See Appendix A)

#### Implications of Uncontrolled Metropolitan Growth

The Port of Spain conurbation already has most of the problems common to metropolitan cities in developed countries. However in

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<sup>103</sup>United Nations, European Seminar on Urban Development Policy and Planning, Warsaw, Poland, op. cit., p. 9.

addition to traffic problems, blighted areas, mixed land use, inadequate and badly distributed open space, social disorganization and unsightly structures, Port of Spain is plagued with illegal construction, invasion of Crown and private land by squatters and frenzied speculation in land. If uncontrolled growth is permitted the scale of these would be magnified, thereby incurring high economic and social costs.

The projected doubling of the population will result in either a considerable increase in density in existing developed areas or an extensive redistribution of areas among different uses. Increase in density or in intensity of use which in some cases is perfectly feasible may have certain advantages. It presupposes maximum utilization of resources of these areas and extensive development of their so-called carrying capacity. However until comprehensive redevelopment is effectuated, it will entail overcrowding and congestion in already built-up sections of the area, chaotic growth, meaningless sprawl and substandard development in new areas. The sporadic allocation of small areas of land for building purposes as additions and extensions of the existing obsolete urban pattern will only accentuate the existing urban problems rather than solve them, thereby increasing high economic and social costs.

It is estimated that the cost of housing lies between 40 and 50 percent of the total cost of new settlements.<sup>104</sup> Two studies,<sup>105</sup> one

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<sup>104</sup> Barbara Ward, The Process of World Urbanization, Background Paper No. 1, Round Table Conference on the Planning and Development of New Towns, Moscow, 1964, p. 6.

<sup>105</sup> Ibid., pp. 6-8.



at either end of the spectrum of urban development, the Indian Ministry of Works' estimate of housing costs on one hand, and on the other studies made by Dr. P. A. Stone on the costs in New Towns in Britain, suggest that the cost of housing is decisively more expensive in large urban concentrations. In addition, Dr. Stone reveals another element of extra cost. Higher density leads to higher buildings, and the moment a construction goes beyond four floors it is more costly both to build and maintain. On the basis of the foregoing it can be anticipated that the marginal cost of accommodating the increased population in the conurbation is likely to be high.

In the strategy of economic development, the government of Trinidad and Tobago proposes to create a framework favorable to investment, and to persuade as many persons as possible in the territory or abroad to create new employment opportunities. The Draft Second Five Year Plan states:

...it is the prudent investment of public funds in the improvement of such public facilities as education, electricity, transport and communications, health, water and drainage (the so-called infra-structure of the economy) that create a climate which facilitates and invites private capital investment in the production of goods and services both for local consumption and for export. Apart from the intrinsic social value of these facilities, their absence would place a burden on the private investor which would be too great to enable him to compete with imported goods or in export markets--with the result that there will be little private investment except in commerce and real estate.<sup>106</sup>

In dealing with industrial targets the plan further states,

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<sup>106</sup> National Planning Commission, op. cit., p. 3.

To attain one of the major objectives of the Second Five-Year Plan, namely to redress the present imbalance of the economy by reducing its dependence on oil and greatly increasing the role of other manufacturing industries, it is necessary to achieve a growth rate of the non-petroleum sector of our manufacturing industries excluding sugar refining of 8.7 per cent per annum; that is, a rate nearly as high as the extraordinarily high rate of the immediately preceding years....

Clearly, almost any new manufacturing industry can make a contribution to the economy. But special emphasis will in future be placed on industries which are based on indigenous raw materials, which offer jobs for relatively large numbers of workers, or which are designed to replace sizeable imports or can serve an export market. It is to be noted that the employment criterion is only one of four mentioned above. Under Trinidad and Tobago conditions, with the small size of the domestic market, the need to develop exports and hence to maintain competitive production costs is of great importance and capital-intensive industries which often have the lowest costs of production must therefore be welcomed along with the labour intensive-industries.

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All such activities create values that would otherwise have to be imported; they create jobs, increase incomes, raise the technological level of the country's productive apparatus, diversify its economy and make it less vulnerable to fluctuations of export prices and world demand for the present major exports of oil, sugar, cocoa and coffee, particularly oil.<sup>107</sup>

On the basis of Rosenstein-Rodan's statistics which show that between 50 to 70 percent of the meager resources available for capital investment in developing countries goes into the provision of overhead capital, Rodwin suggests that, it is essential to ask where these resources can best be employed for minimum outlay or for maximum impact.<sup>108</sup>

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<sup>107</sup> Ibid., pp. 221-222.

<sup>108</sup> Lloyd Rodwin, "Linking Economic Development and Urban Policy in Developing Areas," Working Paper No. 18, U. N. Seminar on Regional Planning, Tokyo, 1958, E/CN.11/RP/L.25.

Industrialization leads to large agglomerations in search not only of location and scale economies but also of what has been called urbanization economies.<sup>109</sup>

There are strong, in fact irresistible arguments in favour of concentration of industry for sustained economic growth. Development economists are concerned not only about the economic viability of a single industry, but point out that the concentration of industries in metropolitan or industrial regions is the most efficient and propitious method of maximising the "forward and backward linkages" necessary for continuing industrial growth. Recent economic theory has tended to re-emphasize the need to encourage the development of combinations of properly sited industries which will produce a maximum multiplier effect. This means that in the early stages of growth, a considerable sector of new industrial developments should continue in concentrated areas.<sup>110</sup>

The same author however points out that:

...there is general agreement that in metropolitan regions, the economies of scale make for concentration of industry. However, their attraction and the consequent debilitating effect of slum housing and social instability. The consciousness of the grave social costs of deprivation make them centers of articulate protest, and demands for social reform.<sup>111</sup>

In a democratic society such as Trinidad and Tobago economic advance is valueless if it cannot provide for the great mass of people a steady improvement in the quality of their homes and their social environment.

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<sup>109</sup> For a theoretical exposition of the different types of economies, see Walter Isard, Location and Space-Economy (Massachusetts: The Technology Press of M.I.T., 1956), Chapter 8.

<sup>110</sup> Paula Echeverria, "Housing Construction and Related Community Facilities Within Industrial Development," Working Paper No. 6, Seminar on Social Aspects of Industrialization, Minsk, August, 1964, pp. 13-14.

<sup>111</sup> Ibid.

## Decentralization

Tarlok Singh provides the solution to this apparent dilemma in a paper presented at a conference on urbanization in India. He states:

There is a large measure of agreement that concentration of urbanization in metropolitan cities, unavoidable as it may have seemed, entails high social and economic costs, and that, to the extent possible, other patterns of urbanization should be promoted, with economic and social overheads being used as an important lever of development.<sup>112</sup>

Hence since Rodwin proposes 100,000 as the lower limit of population for cities in which growth can be self propelling the feasibility of decentralization of the Port of Spain conurbation can be investigated. It should be noted that decentralization in this context means the promotion of "a more desirable pattern of growth, not the reversal of the trend toward concentration."<sup>113</sup>

The reply of the panel on "Port Development Planning and the Implication for Social and Economic Development," at the Seminar on the Contribution of Physical Planning to Social and Economic Development, to the delegate from Israel who raised the point that the improvement of port facilities in the San Juan area appeared to be in contradiction to the decentralization policy is relevant here.

The panel replied that the policy of decentralization was not based upon suppressing economic improvement in one area but rather based on improving other areas so as to make them more

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<sup>112</sup>Tarlok Singh, Rural Industrial, and Urban Development, India's Urban Future, op. cit., p. 329.

<sup>113</sup>Sachin Chaudhuri, Centralization and Decentralization, ibid., p. 220.

attractive to industrial development.<sup>114</sup>

...no country aims at absolute dispersion that is to say an even distribution of employment population and wealth as far as possible.<sup>115</sup>

Chaudhuri's observations shed further light on the subject;

...Decentralization of economic activity becomes a policy of locating industries in a proper manner. The program has necessarily to be centered on those activities in which there is a real choice. There is, for instance, no question but that the mines have to be where the minerals are found, or in the case of heavy industries ...that the location is more or less determined by the occurrence of raw materials, and that economy of operations requires the unit to be large. But, with efficient transport and adequate power facilities, there is room for influencing the other industries to spread out. Decentralization, thus, becomes in effect a program for the orderly location of light and consumer industries.<sup>116</sup>

With regard to the modus operandi of the control of metropolitan growth, the Report of the United Nations Conference on Urban Development Policy and Planning states:

By and large, two types of instruments have been employed to control the growth of metropolitan cities and to stimulate the development of the backward or depressed regions: the negative and the positive. The negative instruments comprise various administrative restrictions (and in some cases financial measures such as location tax). It has been the general experience in a number of countries, however, that the influence of the negative powers when used alone has been rather limited. A reluctance on the part of the public authorities to apply firmly these measures has often been a major cause of their weak effect. The use of positive means has proved somewhat more successful, especially in combination with restrictive measures. The positive means comprise regulation of industrial development, acquisition of

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<sup>114</sup> Alvin Mayne (ed.), Proceedings of the Seminar on the Contribution of Physical Planning to Social and Economic Development in a Regional Framework, May, 1960 (mimeo), Puerto Rico Planning Board, p. 209.

<sup>115</sup> Van Os, op. cit., p. 36.

<sup>116</sup> Chaudhuri, op. cit., pp. 232-233.

land in order to guide urban growth, provision of technical, financial and other forms of concrete assistance to promote new industries.<sup>117</sup>

It is proposed that Trinidad and Tobago should adopt the positive means. This approach is not (in fact) totally new to the territory. Some of the elements have been for some time utilized, but without any concerted or coordinated effort. Pioneer industry legislation was enacted about fifteen years ago in order to provide incentives to local and foreign investors. The incentives offered include the following:

- (1) an income tax free period from the start of operations;<sup>118</sup>
- (2) accelerated depreciation allowances;
- (3) unlimited carry-forward of any losses that may be incurred during the income tax free period into the subsequent taxable period;
- (4) repatriation of capital and profits for foreign investors;
- (5) duty free imports of plant, equipment, raw materials and supplies; and
- (6) developed industrial sites on liberal terms.

The Industrial Development Corporation established for the purpose of encouraging and fostering the establishment of new industries embarked soon after its creation in 1957 on the development of industrial estates. The location of existing and proposed industrial estates is shown in Fig. 2.

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<sup>117</sup>United Nations European Seminar on Urban Development Policy and Planning, op. cit., p. 8.

<sup>118</sup>National Planning Commission, op. cit., p. 218.



Under the Plan the Industrial Development Corporation will also continue its programme for the development of existing industrial estates. Some new development will also be undertaken in selected areas where there is need for the establishment of industrial activity or where the availability of raw materials warrants it.<sup>119</sup>

Thus the Plan fails to envisage the use of industrial estates as a tool in a nation-wide policy of industrial location tending to divert industry from congested areas and to steer it towards new centers as was done in Britain after the second World War.<sup>120</sup> On the contrary location of industrial estates appears to respond to the pressure to allocate earmarked resources "among a large number of small projects scattered widely over the national territory."<sup>121</sup>

There is frequently a dilemma which must be faced in the early stages of development, whether it is better to concentrate on the more favorably situated areas and secure a quicker and larger return or to aim at a more even pattern of development.

Trinidad and Tobago has the opportunity with respect to its urban development policy to benefit from the experience of Puerto Rico where, as was discussed earlier, both the one plant in each municipality policy and later the attempt to direct industry to eleven preselected cities failed to stem the tide of migration to the San Juan metropolitan

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<sup>119</sup> Ibid., p. 227.

<sup>120</sup> United Nations, The Establishment of Industrial Estates in Underdeveloped Countries, ST/ECA/166, New York, 1961.

<sup>121</sup> Hirschman, op. cit., pp. 190-192; S. H. Rabock, Regional and National Economic Development in India Papers and Proceeding of the Regional Science Association, Washington, D.C., December, 1959.



area, and also from the experiences of other nations both developed and underdeveloped.

For one thing, most of Trinidad and Tobago's urban expansion and economic development is still to come, which means that the pattern is not yet set and many alternatives are potentially open. Given adequate agreement upon and understanding of desirable goals and suitable criteria, it should be relatively easier and cheaper to achieve its goals in new development than in redevelopment and reorganization of obsolete cities.

Support for this position is found in Chaudhuri's following conclusions,

A country in the early stages of development has certain advantages. Since it launches upon planned development, it must have a social philosophy to the extent that a social philosophy informs its economic policy, the instruments of control that planning provides can be used for making urban development conform to the desired pattern....It is easier to influence the location of new industries than to remove or disperse old established industries, by and large, in the planning of urban development, the necessity of rebuilding would be comparatively small though it would not be negligible by any means.<sup>122</sup>

#### Conclusion

If a decentralization policy is to be conducted with success in Trinidad and Tobago, all measures will have to be directed towards creating "growth poles"--poles de croissance as contemplated by Perroux<sup>123</sup>--which counter magnets can successfully withstand the

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<sup>122</sup>Chaudhuri, op. cit., p. 238.

<sup>123</sup>F. Perroux, "Note Sur La Notion de 'Pole de Croissance'," *Economie Apoliquee*, 1955, Vol. 8: 307-320.

attracting power of the Port of Spain Conurbation.

The urban and industrial pattern is largely shaped by public decision and investment, which can be used as a lever to encourage the desired form of development. Furthermore many services are required by industry and business which can only be supplied by government. Hence the judicious use of public investment in infrastructure and economic and social overhead are the controlling levers which applied at the right time and in the right places can be used to create the necessary poles of attraction.

In order to establish the main countermagnet to the Port of Spain conurbation a deep water harbor should be constructed in the vicinity of San Fernando. This would stimulate industrialization of the southern section of the territory, where the oil fields are located. Israel where "a conscious effort to promote a policy of dispersal led to the building of a new port rather than the extension of the existing port at Tel Aviv"<sup>124</sup> provides a precedence for this approach. As a consequence of this measure San Fernando should be enlarged from the present population of 52,430 for its urbanized area to about 200,000. Satellite towns around San Fernando should be developed to accommodate further anticipated urban population expansion in that area.

The provision of satellite towns is recommended in deference to a viewpoint expressed at the Symposium on the Planning and Development of New Towns. It was considered important from the standpoint of the developing areas, that new towns established within commuting distance

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<sup>124</sup> Mayne, *op. cit.*, p. 312.

of a large urban area offered appreciable advantages for countries with limited resources and conflicting claims of high priority. In such communities, not all facilities need to be provided at the start, as would be the case in isolated new cities. Employment opportunities in the "parent city" could be used during the long development period; also the overhead costs of housing and utilities might be lower in isolated projects.<sup>125</sup>

As a secondary countermagnet and growth pole the feasibility of removing the seat of government from Port of Spain to a portion of the site formerly occupied by the United States base at Waller Field should be explored. This site has the tremendous advantage of being already government owned and thus the phenomenal expense of acquisition would not be necessary. Located three miles southeast of Arima and seven miles from the International Airport Waller Field is within easy reach of both Port of Spain and San Fernando by fast motor road. Because of its more central location it could provide a stimulus to the urbanization of the eastern section of the territory.

These recommendations should be analyzed and justified by the use of the cost-benefit analysis technique. This is, however, beyond the scope of the present undertaking and should be the subject of another study.

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<sup>125</sup>United Nations, Housing Building and Planning Branch, B.S.A., Report of the Symposium on the Planning and Development of New Towns, Moscow, 1964 (unpublished).

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APPENDIX

## 27th WORLD CONGRESS, JERUSALEM 1964

Theme II: NATIONAL PLANNING FOR THE REDISTRIBUTION OF POPULATION AND FOR THE BUILDING OF NEW TOWNS

Preliminary Introductory Report by Artur Glikson.

Reports from the following countries were on hand by May 1st, 1964: Czechoslovakia, Denmark, France, German Federal Republic, Great Britain, Israel, Italy, Japan, Malaya, the Netherlands, New Zealand, Norway, Poland, Portugal, U.S.A. These reports form the basis of the following summary.

A. INCENTIVES OF PLANNING AND POLICIES.

The common incentive to the formulation of plans, policies and/or public demands for the redistribution of population in any country lies in an existing or threatening imbalance of the settlement structure. Settlement structure is the result of relationships established in time between a population, its environment and economy in the urban and rural areas of a region or country. Any change or disturbance affecting one of these components, therefore, leads to an imbalance in the settlement context as a whole, and consequently, to a search for a new adaptation by evolutionary or revolutionary changes. Changes in population, environment or economy may result from interior growth or decay, or from an exterior impact; in many cases a quantitative change is closely related to qualitative aspects such as cultural patterns, health, habitability etc.

The reports, though from only 15 countries, describe a wide range of varieties as well as similarities between factors which create structural imbalance in a country. Urbanization is the major common motive for considering the redistribution of population. Japan is an extreme example, a country the population of which is expected to increase in twenty years by ca. 17%, but urban population is expected to grow during the same period from 44% to 70%, which means that the number of city dwellers will increase by 35,000,000. In New Zealand, economic diversification may lead to heavier urban concentrations, and even today some 70% of the population may already be classed as urban. For France, Great Britain, Japan, Malaya, Poland and Portugal, the drift of population to one or two excessively growing metropolitan areas constitutes a planning problem of the first magnitude. In the German Federal Republic the rapid development of an agrarian into an industrial society creates the need for the planning of spatial adjustments.

Czechoslovakia, and also the U.S.A., consider the need to cut down the time and the cost of workers' transportation an incentive for urban redistribution. In Israel, the needs of the social and cultural adaptation of a new immigrant population call for a revolutionary change in the distribution of population on a country-wide basis. In Italy, the increasing difference between economic and social conditions in the North and in the South make national planning for a redistribution of the population a growing need. In the Netherlands, the occupational shift to industry and services, accompanying the rapid population increase, dictates a new policy and planning for urbanization. In Denmark and Norway, on the other hand, the problem of the distribution of population is of a limited scale, and some planners are of the opinion that Copenhagen should make efforts to attract more population and enterprises in order to maintain its position as an industrial and commercial port. In all these countries, population increase, industrialization and the inadequacy of urban environment are at the root of a planned or unplanned, slow or rapid change of settlement structure.

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## B. THE MAIN OBJECTIVES OF PLANNING.

In most countries it is considered that the general purpose of the redistribution of population and of the creation of new towns is to extend to all parts of the country the social, cultural and environmental benefits of accumulation and equal accessibility to civilization (Czechoslovakia, Denmark, France, Israel, Norway). Though no country-report advocates the extinction of all differences between town and country, most of them consider the liquidation of differences between standards of living an essential aim of Planning Policy.

Ideas and plans for new settlement structure, which would respond best to the general objectives of the redistribution of population, vary from country to country. For Czechoslovakia, Poland and parts of the Netherlands, the National Plan foresees the evolutionary change of the existing hierarchical network of settlements, which is considered too dense, and the creation of a "modernized" hierarchical order of 3 - 4 categories of towns by the development of selected towns. The achievement of a similar aim in Israel calls for a "geographical revolution" which has, in fact, been carried through within the last 15 years by the building of more than 20 new towns. Japan, in spite of the overwhelming difficulties of keeping its metropolitan centres in working condition, is considering "economic rationality" as the main determinant of a future pattern of urban settlement. Accordingly, the national development plan will encourage both metropolitan growth and regional urban development. In France it is intended to develop eight urban agglomerations of over one million each, in order to counter-balance the attraction of Paris. In the German Federal Republic it is considered that Planning will help to bring about in future a uniform distribution of population in the Federal area. Portugal is studying the redevelopment of its rural areas, and even the repatriation of rural migrants (from Lisbon and Porto) as an object of national planning. The Netherlands' National Plan envisages a composite pattern of viable rural centres, regional centres, larger industrial towns, a few big towns (up to 200,000 inhabitants) and the great metropolitan area in the West part of the country, which is increasingly considered as part of a "Megalopolis" of the Rhine delta. The main objectives of national planning policy in Great Britain are the restriction of the growth of London, the re-housing of "overspill" population in new towns and the control of the location of industrial development.

In heavily urbanized countries (the Netherlands, Japan, the U.S.A.), a solution is sought through the creation of a new regional settlement structure rather than through specified local development. "Regions" are conceived not merely as areas of balanced agricultural-industrial-and-service development distributed over a hierarchical pattern of towns and villages, but as "urban regions" or "regional cities", as first envisaged by Clarence S. Stein. In the U.S.A. larger new developments are actually planned as Urban Region Schemes of several coordinated and simultaneously executed towns. The western Netherlands is being rapidly transformed into a belt of urban areas, though each town is intended to preserve its individuality. In a recent article, Prof. Peter Self proposes for Great Britain the establishment of "countermagnets to the excessive draw of conurbation". It is proposed to establish through regional development corporations a few groups of towns of 250,000 to one million inhabitants, each group clearly separated from the London area.

Regional differences within a country often require the planning of a composite pattern of settlement regions, rather than of a uniform national scheme. Norway, Italy, New Zealand and the Netherlands are taking regional differences into account and are planning for different optima of settlement structure. Such differences may lie in physio-graphical and socio-cultural factors influencing the distribution of

population. Equally important is the existing or planned economic background of developing regional or industrial towns. The reports from Great Britain, France and Israel lay stress on trends of developing regional towns on the basis of a balanced occupational pattern (services, industry, commerce, recreation etc.), whereas Czechoslovakia is basing its program of urbanization to a larger degree on the concentration of specialized branches of industry in each developing town. In the first stages of new town development, industrial development is nearly everywhere the occupational basis for the redistribution of population. In Israel, however, many workers in the new towns are still employed in agriculture. It is interesting to note that in the U.S.A. industrial corporations form at present the foremost new town developers.

### C. FACTORS INFLUENCING CONCENTRATION AND DECONCENTRATION OF URBAN DEVELOPMENT.

Rural and regional underemployment and the lack of infrastructure create a "push" towards big centres, whereas the still prevailing tendency of industries, administration and science to form "super concentrations" in existing big towns exerts a "pull" on population movements. But important "natural" factors favouring the development of regional towns and industries are counteracting the trends of metropolitan concentration.

In addition to the attractive powers of metropolitan centres, the following factors enhancing concentration are mentioned in the country reports:

- The attractive power of existing concentrations of capital, labour, techniques and markets of a great port and a capital city, and of the variety of the prospects of employment of the urban way of life and of a high standard of services;
- The "push" effect of emigration from agricultural regions due to population increase and/or mechanization of the methods of cultivation;
- Transitional economic and social conditions prevailing in developing regional towns;
- The high per capita cost of building new towns.

Other factors are listed in the reports as having a favourable effect on the development of existing and new regional towns:

- Location factors, including the availability of labour of many basic and raw-material industries;
- Savings on the costs of the transportation of workers and goods;
- A high rate of natural increase in country areas;
- The increasing importance of the development of recreation and tourism;
- The mobility of population, as in the U.S.A. and Israel, and the shift of population from the countryside to regional centres (the Netherlands);
- Electrification and modern means of communication;
- Aid and encouragement given by governments;
- Interest of large-scale industrial developers, as in the U.S.A.;
- Intensified regional development of rural areas, as in Israel;
- The pressure of public opinion for a greater balance in settlement structure;
- Difficulties of traffic, water-supply and congestion, as well as scarcity of land and soaring land prices in big cities.

Obviously, all these "negative" and "positive" factors carry a different weight in each particular country or region.

#### D. SOLUTIONS AND IMPLEMENTATION.

In most participating countries it has been recognized that one cannot leave the "natural" forces pressing for concentration or decentralization of population, settlement and economic activities to result in solutions by blind chance. The contemporary scale of population increase, industrialization and environmental problems make it increasingly necessary for governments to formulate goals of comprehensive development and to regulate or direct the "natural forces" towards the achievement of new pattern of regional settlement.

Political systems determine the nature of the measures of implementation taken by governments. In the U.S.A. the government is not responsible for the distribution of population, except in case of war or in an emergency; but the redistribution of population is encouraged by indirect Government aid, such as guarantees for loans, the execution of technical-economic projects such as the big watershed projects (T.V.A., Columbia, Colorado, and Missouri rivers), the national highway policy, federal aid for community facilities in smaller towns and the execution of demonstration projects. Portugal pursues a policy of giving active support to rural development, while discouraging further metropolitan concentration. In Israel, the government is the main factor initiating, investing, executing or stimulating urban and rural development in all development regions, and to a lesser degree, in existing big city areas; in the latter the goal is consolidation rather than expansion. In Japan the government is taking measures to expedite the improvement of areas within big cities, to build expressway networks and new satellite towns in the metropolitan areas, to promote the growth of "regional leading centres" in remote regions, and to induce new industries to settle in underdeveloped regions. In Great Britain the government influences the population distribution by financing the building of new towns and by the power of the Board of Trade to grant or withhold industrial development certificates. In the Netherlands, the government employs indirect means to create a favourable industrial and cultural "climate" for desired developments, (mainly by means of public works) except in the IJsselmeer polders, where the Dutch government is engaged directly in planning, investing and executing rural and urban development. The report from the German Federal Republic gives expression to the demand that traffic policy and the planning of industrial and passengers transportation must be applied to bringing about a sound distribution of population. In Czechoslovakia and Poland the government influences the redistribution of population decisively by locating industrial development and enhancing the infra-structure in selected towns. Realization of the plans is assured here by the active politico-economic interest in decentralization felt equally by all government departments.

Where governments undertake responsibility for the redistribution of population, the preparation of a National Plan becomes a fundamental necessity. The new intention on the part of the government of Great Britain to consider Planning on a more comprehensive regional scale, is criticised in the report from Britain because no determination is revealed to tackle the distribution of population and employment on a national scale. A National Plan with convincing assumptions and clear proposals may provide the impetus needed for the carrying through of measures which would otherwise meet the opposition of local or other particular interests (Denmark). In Czechoslovakia and Poland, a National Economic Plan aims at balancing economic needs and social factors on a firm settlement basis. France advocates the integration of Urbanism and Economic Planning on a national basis. In Israel the first National Plan, directing the new urban settlement to development regions, etc. was in principle a physical plan, which is consecutively being complemented and revised by economic and regional plans. The National Physical Planning Service of the

Netherlands, though part of its work is only in an advisory capacity, is gradually increasing the practical influence of the National Plan on developmental decisions of national importance.

The planning of the spatial redistribution of population cannot be separated from planning the temporal progress of development. In spite of the building of 18 new towns, Government policy in Great Britain has not yet succeeded in stemming the disproportionate growth of population in and around London. Malaya has found by experience that there exists a physical limit to the speed of development of land for new agricultural settlement, and that, therefore, a solution for population pressure problems must be sought on a more comprehensive basis. The development of agriculture and industry in Portugal is overtaken by an undesired emigration from the country. In the U.S.A., on the other hand, the rate of urban growth has reached a degree which makes it possible and attractive for private enterprise to build whole new towns within a reasonable time. Planning and development are conducted in Israel under the constant pressure of time, dictated by irregular "waves" of immigration as well as by the need to balance and consolidate the rapidly changing settlement structure within a short period. The actual growth of Tel-Aviv is exceeding the target of the National Plan for the town. In some cases Israel has paid a heavy penalty for deficient planning; but it also appears that thorough and comprehensive planning is of limited value where the rate of development is not adjusted to the speed of population increase and/or economic growth, and where development priorities are not constantly redefined.

National Plans of themselves, however, comprehensive, are not sufficient as instruments of development. Nor can the planning and realization of "details" of the National Plan, such as new towns, be entrusted to small local administrative bodies. A "bridge" must be created between the national, regional and local Planning levels, all of which have to be brought into coordinated action in order to implement plans of redistribution of population and the building of new towns. The Polish report contains a valuable contribution to this problem by recommending a continuous "dialogue" between planners on various levels, and the confrontation of the respective view-points on specific problems, thus aiming at a planning method of "successive approximation". The report of the German Federal Republic lays emphasis on the need of coordination of the federal, the provincial and the municipal authorities, to make planning schemes effective. Experience in the Netherlands, Great Britain and Israel shows clearly the advantages of forming authorities for new local or regional development in which representatives of both the central governmental and the local authorities participate for the duration of the first development stages. For the future urban development the report from Great Britain recommends the establishment of development agencies on a regional basis, applying a national policy of distribution of population. In Poland there is a somewhat different division of planning authority: General location problems of industry and services are decided upon by economic planning on the national, regional and local level, whereas detailed location problems are left to local physical planning bodies. In countries such as the Netherlands, Denmark and Norway, the "feedback" of experience and views from the local to the regional and to the national authorities, and vice versa, exists as a matter of traditional democratic organization and inter-action, leading to very realistic planning procedures. In Israel, where the central Government has undertaken more functions perhaps of physical planning and development than any of the other reporting countries, the contribution of regional and local authorities in planning matters is assuming ever greater importance with the progress of regional consolidation.



In the U.S.A., Great Britain, France and Israel, public criticism of deficiencies in metropolitan and new town development is an important factor, influencing the governmental planning approach. Some countries, including Great Britain, Malaya, New Zealand, the U.S.A. and Israel, are profiting from earlier negative experience with the building of new towns (especially of satellites of metropolitan areas). Structural imbalance was increased rather than eased by the execution of some projects. The evaluation of such experience may have significance for other countries too, if the particular circumstances of failure are duly taken in to consideration.

#### E. PRELIMINARY CONCLUSIONS.

In most countries, the rapid increase of urban population (proportionally as well as in absolute figures) is creating a civic emergency which may be successfully dealt with by comprehensively planned development.

The growth or decay of towns and villages is always closely connected, or even caused, by changes in a country's total settlement structure. Solutions have therefore to be sought on a regional and country-wide basis, by planning new regional patterns of distribution of population, locations of economic activity and service establishments.

Though urbanization is a world-wide incentive for Planning, close studies of existing settlement structures, trends, problems and conditions in every country are leading to a great variety of Planning solutions for new settlement patterns, even for different regions within a single country. Comprehensive Planning does not infer the formation of a uniform world-wide pattern of urbanization.

At the moment, the dangers of creating uniform metropolitan concentrations appear to be greatest in the poor developing countries, which are unable to rely on local experienced organizations for Planning and Development. One must hope that these countries will learn in time to avoid the mistakes made in European and North-American big city development, and that a thorough consideration of national and local conditions, customs and development problems will lead to a variety of regionally adjusted solutions.

The "natural" trends of concentration in metropolitan centres are always countered by equally "natural" trends of distribution of urban centres and deconcentration. It appears that in both developed and developing countries the latter trends will gain strength in the future.

Planning for balanced regional development is always based upon a National Plan and central governmental decisions. But the implementation of such Planning may best be achieved by a balanced and gradual delegation of authority among the national, the regional and the local Planning levels, to be followed up by constant exchange of information and collaboration.

The development of society and technology is increasing the range of alternatives of "economic" locations of industries, services and habitations. It appears, for that reason, that populations and governments will have to make up their minds about the kind of settlement structures they desire. Planners should therefore make a start with balancing the research of the determinants of settlement structure with the search for environmental values.

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## APPENDIX B

## 27th WORLD CONGRESS FOR HOUSING AND PLANNING

Jerusalem, 22 - 27 June, 1964

Report from Israel.Theme II: NATIONAL POLICY FOR THE REDISTRIBUTION OF  
POPULATION AND FOR THE BUILDING OF NEW TOWNS.a) Objectives to be Sought in Population Distribution

On its establishment, the State of Israel set itself the goal of bringing to the country a maximum number of Jews from the Diaspora, and of settling them in the new State. This implied the following objectives:

1. Constant readiness to absorb a large additional population over and above the natural rate of increase.  
Since the waves of immigration to Israel are dependent on various unforeseeable political and economic events in the rest of the world they are irregular and require complete immigrant absorption plans to be ready at short notice.
2. A balanced geographical distribution of the population over the entire country in order to ensure a rational dispersion of the population also in border districts, in mountainous areas and in the northern and southern parts of Israel.
3. The maximal settlement of the entire territory of the State within the shortest time possible, with a view to ensuring adequate sources of livelihood, good housing conditions and an appropriate standard of living for all.
4. Preventing the overpopulation of densely inhabited urban centres in the agglomerations of Tel Aviv and Haifa and on the coastal plain, and attraction of the population to the rural sector, in both agricultural and service occupations.

b) Factors Affecting Distribution of Population (economic, social, etc.)

These factors may be divided into two categories, those which impede and those which promote the distribution of the population.

The impeding factors are:

1. Most of the population in the development towns stands in need of primary economic rehabilitation and consolidation. The immigrants' employment is only temporary, mainly in development works in the field of construction, agriculture and afforestation, which engenders difficulties of adaptation and adjustment and enhances the tendency to commute to larger and better developed towns.

2. The per capita costs of erecting new towns and of construction in the less populated regions are much higher than in the more developed areas. While the public funds allocated for the development zones are greater, the quality of building is lower.
3. The development towns, during their initial steps, suffer from defective educational and cultural services, and the standard of housing does not always attract immigrants of all classes.
4. Inevitably the leadership in the development towns initially rests with old-established residents from outside, or with government officers, which is hardly in keeping with the wishes of the inhabitants. It is generally difficult to rely on an internal migration of veteran residents to development zones, since the development towns lack the comforts and prospects of advancement they have come to expect.
5. The major old-established cities in Israel attract the better professionals and experts among the new immigrants. They rapidly adapt themselves to the larger city, with a corresponding rise in their living standards.
6. Private investors tend to concentrate their capital in or near the major cities and thus to create new sources of employment there, contrary to the national interest.
7. There is a constant trend and pressure for the expansion of basic and secondary industries in Tel Aviv and its vicinity.
8. There is a tendency to concentrate administrative, cultural, welfare and health institutions in the major cities and in the coastal plain, which acts to the detriment of the settlements on the periphery of the State.

The factors promoting the distribution of the population in Israel, on the other hand, are:

1. The development zones have higher rates of natural increase than the areas of Tel Aviv, Haifa and the coastal plain, thanks to the larger proportion of oriental communities in the development towns.
2. The major cities suffer from a scarcity of available land, so that the price of vacant plots for building purposes is extremely high. This encourages building outside the existing densely populated localities.
3. The government policy concerning immigrant absorption, housing and location of industry is directed towards increasing employment in the development zones.
4. The rate of building in the development zones is geared to the speedy transfer of the population from temporary living quarters to houses of a higher building standard.
5. The government encourages investments in the development zones, and grants subsidies and tax reductions to inhabitants of these areas.

6. In certain parts of Israel (e.g. the Lakhish Area or the Adulam Area) extensive regional settlement projects are carried out, comprising service centres which facilitate the settlement of a larger area.
7. Professionals, e.g. teachers, physicians and engineers, are encouraged to move to development areas by providing them with housing, better pay, etc..
8. Immigrants' housing in development areas is erected prior to the arrival of the immigrants in Israel. Their immediate transfer from the boat to their future home facilitates their adaptation to the new place.
9. Cultural and commercial centres are developed at as early as possible a stage in order to lend a truly urban aspect to the towns.
10. The development of mineral mining works, especially in the Negev, helps to provide employment for the population in the southern part of the country.
11. By the development of a good communication network a wider distribution of the population may be achieved: people living in distant places yet remain close to the centre of the country.
12. The development of tourism, recreational facilities, and the hotel industry helps to promote settlement and provide employment in mountainous areas and outlying districts.

c) Ways and Means of Implementing a National Plan for Population Distribution

Planning alone is not sufficient in order to implement the programme of population distribution. A favourable attitude is required on the part of all institutions concerned. The State is actually the main potential lever for achieving this goal, since it is the government that supplies housing to immigrants, covers the costs of primary services, invests the majority of the funds in development projects, grants subsidies to private undertakings, builds highways, brings immigrants to the development zones and trains them for their new life there, provides employment, etc.. By cooperation and coordination between government offices and public institutions a more rational distribution of the population may be achieved, whereas the stabilisation of the new population in the development areas may be attained by the proper channelling of demographic changes, by social integration, by ameliorating the economic basis of the new immigrants and by developing every locality in accordance with its regional needs and distinctive features.

The principal ways and means by which the distribution of the population may be brought about are:

1. Approval of the Building and Planning Law now before the Knesset (Parliament), under which a Supreme Planning Council is to be set up, one of whose duties will be to give statutory authority to the Project for the Distribution of the Population, binding for all institutions and bodies concerned.
2. Giving official standing to the Priority Regions Plan, by which the different parts of the country are to receive varying degrees of attention from the point of view of development.
3. Granting priority to the expansion of rural housing in the new settlements.
4. Maximal allocation of services to rural areas to be located in the regional centres or towns.
5. Creating and maintaining a favourable, constructive atmosphere in the development towns by augmented grants for the improvement of existing housing, housing for young married couples, developments works and the establishment of educational and cultural institutions.
6. Improvement of the communication system to the newly established centres.
7. Transfer of hierarchic functions from the major cities to the smaller urban centres.
8. A more rational distribution of national and regional institutions instead of their present concentration in the centre of the country.
9. Decentralization of the industrial centres and transfer of undertakings to the development zones.
10. Maximum avoidance of extending industrial areas in all conurbation areas beyond the degree required for the employment basis of the existing population.
11. Preservation of agricultural lands, especially in the coastal plain, and withholding government subsidies for housing in undesirable locations. Agricultural land in Israel is limited and will in future have to provide for an ever-growing population. It accordingly requires protective measures. Steps should also be taken in order to prevent urban extension on agricultural land.

Recently the Government has given special attention to the problems of population dispersal and has appointed a special committee to deal with this matter. Implementation of the Committee's resolution will constitute another step forward in the achievement of a more extensive and rapid distribution of the population. Greater care will thus be exercised in the siting of industries and enterprises which are a paramount factor in the realization of this policy.

The major problems encountered by us within the framework of reference of the Congress are:

1. Can a policy of distribution of population be carried out without the financial burden being shouldered by the Government, especially in border regions or peripheral areas?
2. Should priority be given to the construction of a small number of larger cities, or to a larger number of smaller towns?
3. Will the erection of satellite towns contribute to the redistribution of the population?
4. What is the optimal number of new towns to be erected in a developing country, in relation to the number of the population, the size of its territory and its stage of development, and what is the optimal size of such new towns?
5. According to an existing government resolution the sale of land and private building in the densely populated coastal plain has been "frozen". To what extent is such a land policy in Israel liable to lead to a rational redistribution of the population?

J. Dash, E. Efrat

27th WORLD CONGRESS FOR HOUSING AND PLANNING, JERUSALEM 1964

Theme II: National Planning for the Redistribution of Population and for the Building of New Towns.

Reported by Arthur Glikson.

Proposed recommendations:

- 1) The contemporary process of change in population distribution and settlement structure, both in developing and developed countries, is a consequence of interacting developments in economy, culture and technology, and of population increase. For economic, social, and moral reasons, and in view of the wide-spread environmental deterioration and structural imbalance in town and country, the coordination and/or guidance of these developments is increasingly becoming a governmental responsibility. Comprehensive national and regional planning must form the basis for the direct or indirect measures of such governmental control. For many countries, over-concentration and congestion in metropolitan centers makes it necessary to divert further growth to new and other regionally oriented towns.
- 2) In all countries the implementation of planning for a redistribution of population depends on attaining the optimal land-use by legal and fiscal measures of expropriation and redistribution of land.
- 3) Experience in many countries shows that the coordination of plans for the special redistribution of population and new settlement structures with schemes for the temporal progress of development ("staged" development) is an essential part of comprehensive planning.  
An effective implementation of planned development depends entirely on such coordination.
- 4) The redistribution of population and the building of new towns should be considered as positive measures of comprehensive development, aiming at the creation of benefits deriving from the accumulation of population and techniques, on one hand, and their diffusion to the whole population of a country, on the other. Plans for a new settlement structure of a country should therefore combine, in a balanced way, measures of concentration and de-concentration of urban and rural population.
- 5) Though some incentives of urbanization and structural change are of a world-wide character, close studies of existing national settlement structures, problems, aspects and conditions lead to a great variety of ideas and planning solutions, even for different regions within a single country. Comprehensive planning, therefore, does not imply the formation of a uniform world-wide pattern of urbanization. On the contrary, it is a measure of ensuring regional and local diversification within unifying national frameworks.

- 2 -

6) A National Plan for redistribution of population should create unity of purpose out of a variety of regional conditions and patterns. To implement such plans, an inter-acting system of "bridges" must be established and feed-back must be maintained between the national, regional and local planning levels and authorities.

7) To effect a consolidation of settlement structure and a redistribution of population, the development of a transportation system, with particular emphasis on public transportation, is a vital essential.

8) At present, the dangers of creating new countrywide structural imbalance and metropolitan slums appear to be greatest in the developing countries. These problems are of national and international significance. But the ensuing "mass need" for planning should not, and cannot, be met by simplified and universally applicable methods of mass production of schemes for new urban quarters. Planning for urbanization must be considered as a part of regional planning for urban and rural development, and be studied in each region as a separate case, leading to a variety of regionally and locally adjusted solutions. The urgent need of training local staff and creating regional and national organizations for planning and development should be recognized. Technical assistance should be increasingly extended by international organizations and countries experienced in regional and national planned development.

The IFHP should give special attention to the problems of developing countries. Where necessary, serious attention should be given to international planning for the redistribution of population, based on international economic cooperation.

9) The future of the human environment in town and country depends on scientifically determined indicators of development and projections as well as on the formulation of environmental values and on decisions regarding the desirable patterns of population distribution. The development of society, knowledge and technology increases the range of alternatives of effective location of industries, services and habitations in developing and developed countries. The public should be made aware of the possible alternatives of development and urbanization as proposed by planners. The success of Planning depends on the creation of a strategy of comprehensive development which can seriously attract and increasingly stimulate COMMUNAL INTEREST AND ENERGIES.



THE URBAN DEVELOPMENT PROBLEM IN  
TRINIDAD AND TOBAGO

by

CARLYLE WESLEY ST. CLAIR WARNER

L. L. S., Trinidad Departmental Survey School, 1957

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AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

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MASTER OF REGIONAL PLANNING

College of Architecture and Design

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1965

The Territory of Trinidad and Tobago is a small country situated in the south Caribbean. It is, in fact, essentially made up of two small islands: Trinidad, 1,864 square miles and Tobago, 116 square miles. At the 1960 census, the population was 827,957 representing a gross density of 418 persons per square mile.

The census also revealed that the annual intercensal growth rate was 2.87 percent. The implications of this population growth rate is best comprehended when it is realized that the population of the country will double itself in 22 years, should this rate continue. Projections of the urban population indicate that it will double itself by 1970 and again in 1980.

In Trinidad and Tobago there are only two main urban centers, the Port of Spain conurbation, containing the seat of government, and the San Fernando urbanized area. In 1960 these two centers contained 36.5 percent of the total population; the Port of Spain conurbation alone contained 29 percent of the total population.

The principle of national economic planning is well and firmly established in the territory. However, integration between the many facets of the planning process is lacking. There is no horizontal integration; involving physical, social and economic planning, nor, is there vertical between national, regional and local planning.

As a consequence of the above facts, in spite of the implications of the projected population increase, and the place accorded to agriculture and industrialization in the strategy of economic development, the plan contains no policy with respect to the location of

economic activity and the desirable patterns of urban growth.

This monograph seeks to demonstrate (1) the weakness in the existing planning structure which led to the omission of an urban development policy in the plan, and (2) that decentralization must be the basis of the national urban development policy so as, in the language of the Prime Minister, to yield to the broadest segments of the society such levels of living as are commensurate with modern requirements of human dignity.

In support of this thesis the following broad aspects of the problem are treated: (1) the anatomy of the problem, (2) the need for integrated planning, (3) agriculture versus urban growth, (4) urban development policies in selected countries, and (5) the development of a policy for Trinidad and Tobago.

The study revealed that (1 a) a Bureau of Integrated Planning should be established with subsections dealing with economic, social, and physical planning. (b) The National Planning Commission should include the minister or ministers responsible for Local Government, Community Development and Social Services. The Bureau of Integrated Planning should be secretariat to the National Planning Commission, with the Director of Integrated Planning as secretary/member, (2) exclusive agricultural zoning is necessary in order to fulfill the goals of the plan, and (3) "growth poles" should be established as counter-magnets to the attraction of the Port of Spain conurbation. In this regard this study recommends (a) the establishment of a deep water harbor in the vicinity of San Fernando, the expansion of the San Fernando urbanized area to a population of about 200,000, (b) the

establishment of satellite towns around San Fernando, within commuting distance of the "parent city," and (c) the exploration of the feasibility of the removal of seat of government from its present location in Port of Spain to a more centrally located site on government owned lands at Waller Field.

These recommendations should be analyzed by the use of the cost-benefit analysis technique. This is however beyond the scope of the present undertaking.