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THE GEOGRAPHICAL SIGNIFICANCE
OF THE
FIRST FIVE-YEAR DEVELOPMENT PROGRAMME
OF
TRINIDAD AND TOBAGO, 1958 TO 1962

by

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Submitted for the degree of M.A. - January, 1969.

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FIRST FIVE-YEAR DEVELOPMENT PROGRAMME
of
TRINIDAD AND TOBAGO (1958-62)

PREFACE

This is a study in economic geography undertaken to sort out certain personal reservations about many of the popular assumptions applied to development planning in primary-producing countries. It does not attempt to present a purely economic survey of development planning; neither does it attempt to be a complete geography. Instead, by using the example of the Trinidad and Tobago experience, it aims to show that development planning in such countries needs to arrive at a balance between the use of physical and human resources, which is more within the scope of geographers than it is within the scope of other more highly specialised academic disciplines. Consequently, the thesis considers a wide variety of factors, and its focus shifts rapidly between economic, historical, cultural and political evaluations. (Trinidad and Tobago is my home country.)

The required research could have been particularly unwieldy, had precise boundaries not been imposed. As a result, the thesis has

adopted a specific format: Firstly, since the Development Programme was designed for a particular country, that country's characteristics (e.g. physiological, historical, demographic, political, cultural etc.) have been emphasised. Therefore, Chapter I presents a concise account of the physical features, followed by an introduction to certain demographic phenomena in Chapter II, while a discussion on the significance of the geographical factors related to development planning is set forth in Chapter VII. Secondly, these characteristics were also presented to illustrate the importance of an individualistic approach. Thus, detailed surveys of distinctive phenomena have been included (e.g., Appendix I - Transport and Communication, Appendix II - Local Trade in Market Centres, and similar concentrations of information within certain chapters). Thirdly, to capture the importance of economic and geographical history (as well as current trends), to development planning, a chronological pattern has been adopted to link Chapters III and VI. The pre-Programme economy is discussed in Chapters III and IV, introduced by Chapters I and II, to emphasise the exploitation of the physical resources by the human resource base, and discussing the national accounts. This provides the setting for the description of the Programme in Chapter V and an outline of its achievements in Chapter VI. Lastly, comparisons have been made with other countries, but these are restricted to the topic currently being discussed.

Accordingly, the reader is not expected to assume that such comparisons persist beyond the scope of the topic being discussed.

This thesis does not represent a singular effort. Instead, its completion has depended very heavily on the assistance rendered to me by numerous persons in a variety of fields. In this respect, within the Department of Geography at the University of Durham, one could not help but mention Professor H. Bowen-Jones, my supervisor, whose guidance and encouragement was invaluable, Dr. John M. Hunter, my former supervisor, who was most influential in giving my research a sharper focus and Dr. John I. Clarke, who rendered valuable assistance in interpreting and evaluating statistics on demography. The library and office staff at the Geography Department, the Science Library staff and that of other libraries at the University of Durham have been quite co-operative. Outside of the University, the Royal Commonwealth Society Library in London has been particularly helpful in supplying relevant unpublished data. The reference librarians at the Central Library, Port-of-Spain, Trinidad, those at the University of the West Indies Library, St. Augustine, Trinidad and the Central Statistical Office Librarian, have all been exceptionally co-operative in locating and making available additional source material, particularly the Misses Gloria Martin, Wilhelmina McDowell and Ursula Raymond of the Central Library.

The assistance of other students in related fields has

also been significant. Omolade Adejuyigbe, then a candidate for a Ph.D. in Political Geography (of Nigeria), with whom I shared an office at the University of Durham, had numerous valuable suggestions to offer. Dayanand Maharaj, Ph.D. candidate at Edinburgh University, in Economic Geography, doing research on the Development of the Sugar Industry in Trinidad, has loaned me many relevant documents. Euric Bobb, a Ph.D. candidate in Economics at Cambridge University, doing research on Fiscal Policy in Trinidad and Tobago (1958-68), was particularly helpful in assisting me to interpret deviations from normal tabulation and reporting of national accounts contained in local documents.

A great deal of the material used in my research came from interviews with certain persons in relevant Government departments, as well as manuscripts and documents which they supplied me in the field. Accordingly, I am greatly indebted to the following:

Mr. Earl Timothy of the Ministry of Agriculture, Mr. David Punch of the Ministry of Industry and Commerce, Mr. I. Plozzo, then director of the Fisheries Department, Mr. Daniel Chalmers, then of the Forestry Department, Mr. Oswald Morris of the Industrial Development Corporation, Mr. Frank Rampersad of the Ministry of Finance, Mr. William Demas of the Economic Planning Division, Mr. Alister McIntyre, lecturer at the University of the West Indies, Miss Lynette Mose of the Town and Country Planning Division, and my brother, Ralph,

then of the Education Planning Division, who arranged these interviews during a two-week period.

I am also grateful to the typists who had to struggle through a large volume of often unclear script, as well as the countless other friends who were helpful in various ways. Of these, Cyril Blanchfield was of special assistance in re-reading the typed manuscripts as they came from the typists, a task he shared with my wife, Kathryn and me.

The devotion and encouragement given me by Kathryn, as well as her objective criticism, especially in the field, have been invaluable in the completion of this work.

To all these bodies and persons I acknowledge a great indebtedness.

NOTE

C.W.D.A.	Central Water Distribution Authority
D.L.P.	Democratic Labour Party
GCF	Gross Domestic Fixed Capital Formation
I.D.C.	Industrial Development Corporation
LAFTA	Latin American Free Trade Association
Mn	Million
MW	Megawatt
P.D.P.	People's Democratic Party
P.N.M.	People's National Movement
P.P.G.	Party of the Political Progress Group
Programme	First Five-Year Development Programme
T&TEC	Trinidad and Tobago Electricity Commission
W.H.D.	Works and Hydraulics Department

Conversions

\$1* (Trinidad and Tobago) = 4 sh. 2d.

= \$0.59 U.S. (prior to the devaluation
of the £U.K. in November
1967)

\$4.80 (Trinidad and Tobago) = £1

*Currency given in Trinidad and Tobago dollars unless otherwise indicated.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF MAPS

CHAPTER	PAGE	
I	PHYSICAL FEATURES	1
	Location	1
	Topography	2
	Coastal Features	5
	Geological Background	7
	Tobago	7
	Trinidad	8
	Climate	11
	Natural Vegetation	13
	Soils and Land Use	18
II	POPULATION	24
	Historical Background	24
	Growth Trends	26
	Composition and Structure	27
	Settlement Patterns	30
	Movement	33
III	THE PRE-PROGRAMME ECONOMY:	
	Resources and Exploitation	37
	GOODS: Primary Sector	39

	Agriculture	29
	Fisheries	44
	Forestry	45
	MANUFACTURE AND INDUSTRY	48
	Petroleum Industry	49
	Asphalt	52
	Quarrying	53
	Construction	54
	Manufacturing Industries (excluding Oil)	54
	Sugar	55
	Rum	56
	Beer and Stout	56
	Orange and Grapefruit Juice	57
	Copra Products	57
	Others	57
	SERVICES	58
	Unemployment and Underemployment	60
IV	THE PRE-PROGRAMME ECONOMY:	
	National Accounts	63
	NATIONAL ACCOUNTS	63
	Expenditure on the GDP	63
	Private Consumption Expenditure	65
	General Government Consumption Expenditure	67
	Capital Formation	70

Importance of Trade	77
The Economy Prior to the Development Programme.	86
Dependence on Petroleum	86
Under-explored Resources	90
Trade	
Labour and Employment	94
V. THE DEVELOPMENT PROGRAMME	99
FINANCING THE DEVELOPMENT PROGRAMME	103
THE PLAN IN DETAIL	106
Basic Industries	106
Agriculture	107
Forestry	109
Fisheries	110
Manufacturing	111
Tourism	112
The Infra-Structure	113
Water	113
Drainage and Reclamation	115
Transport and Communication	116
Aviation	118
Port Facilities	119
Electricity	120
The Services to the General Public	122
Public Buildings, Amenities and Local Government.	122

	Housing	123
	Health and Sanitation	125
	Education, Training and Employment	127
VI	THE ACHIEVEMENTS OF THE DEVELOPMENT PROGRAMME	132
	ACHIEVEMENTS	133
	Basic Industries	133
	Agriculture	133
	Forestry	134
	Fisheries	134
	Manufacture and Tourism	134
	The Infra-Structure	136
	Water	136
	Drainage and Reclamation	137
	Transport and Communication (including Telephone)	138
	Electricity	139
	The Services to the General Public	140
	Public Building, Amenities and Local Government	140
	Housing	140
	Health and Sanitation	141
	Education, Training and Employment	141
	The West Indies Federation	143
	Basic Setbacks	144
	Achievement of Main Goals	147

	Employment	147
	Productivity	149
	Amenities	150
VII	BASIC LIMITATIONS TO DEVELOPMENT PLANNING IN TRINIDAD AND TOBAGO	152
	Political Trends	152
	Aims of the Programme in Geographical Perspective.	156
	Basic Productivity Trends (1955-62)	159
	THE DILEMMA OF ECONOMIC PLANNING	161
	The Trinidad and Tobago Experience	162
	The Primary Sector	165
	The Manufacturing Sector	169
	Tourism	172
	NEEDS VS REALITY	175
	Conclusion	186
	APPENDIX I TRANSPORT AND COMMUNICATIONS	190
	APPENDIX II LOCAL TRADE IN MARKET CENTRES	202
	APPENDIX III COMMUNICATIONS NETWORK OF TRINIDAD	Pocket
	A SELECTED BIBLIOGRAPHY	208

LIST OF TABLES

TABLES		FOLLOWING PAGE
1.1	Trinidad and Tobago - Land Utilization	21
2.1	Slave Compensations After Abolition (1837)	24
2.2	Sex Ratio by County, Ward, City and Borough	29
2.3	Ethnic Composition by County, City and Borough.	31
2.4	Population Growth in Certain Towns	31
2.5	Non-Institutional Population by Sex, Migration Status and Place of Birth.	33
2.6	Movement from Tobago to Trinidad	33
3.1	Gross Domestic Product at Factor Cost by Sector 1951-1961	37
3.2	Percentage Contribution to Real Gross Domestic Product at Factor Cost.	37
3.3	Export of Agricultural Commodities	42
3.4	Trees per 100 acres by Major Forest Types	46
3.5	Production of Asphalt - (1954-58)	51
3.6	Quarry Products	52
3.7	Production of the Most Important Commodities, 1954-58.	54
3.8	The Service Sector (1953-57)	58

4.1	National Accounts	63
4.2	Private Consumption Expenditure in Real Terms at Constant 1960 prices	66
4.3	Index of Growth in the Public Sector	67
4.4	Capital Formation Expenditure	68
4.5	Real Fixed Capital Formation by Sectors	71
4.6	Percentage Contribution to GDP and GCF by Sectors - Selected Years	71
4.7	Balance of Visible Trade	77
4.8	Import Content of Demand Component (1951-59)	79
4.9	Balance of Payments	80
4.10	Net Investment Income	80
4.11	Visible Trade (1951-59)	85
4.12	Population Growth in Selected Settlements	86
4.13	Current Balance of Payments	92
4.14	Government Revenue and Expenditure	94
5.1	Former Economic Programmes	99
5.2	Revenue and Expenditure of Development Programme	103
5.3	Components of Development Programme	105
5.4	Funds Allotted to Tobago's Development	105
5.5	Water Scheme	114
6.1	Actual Expenditure of Development Programme	132

6.2	Number of Man Days Lost Through Industrial Disputes	146
6.3	Labour Productivity (by Sectors)	149
7.1	Number of Representatives, Electors and Voters	152
7.2	Balance of Trade, 1956-62 (Selected Items)	157
7.3	Foreign Visitors in Selected West Indian Islands	172
7.4	Passengers Arriving and Departing by Air and Sea, 1959-1963	173
7.5	International Travel	173
7.6	Gross Domestic Product : selected countries	176.

LIST OF FIGURES

Figure		Following page
1.1	Climate: a) Temperature Variations b) Relative Humidity c) Rainfall	11
2.1	Birth Rates and Death Rates per Thousand of Population, 1901-1963	26
2.2	Age-Sex Structures of Trinidad and Tobago at Census Surveys, 1901 to 1960.	27
2.3	Comparing Age-Groups From 1946 and 1960 Census Statistics	28
2.4	Number of Persons Immigrating or Emigrating Annually, 1946-63.	33
2.5	Proportion of Movers in Population by County, Borough and City, 1960	33
3.1	Percentage Contributions of Components of Primary Sector (1951-61)	38
3.2	Comparison of Goods and Services: Growth Trends, 1951-61.	39
3.3	Post-War Growth of Sugar Production, 1946-60.	55
4.1	Growth of per Capita GDP, 1951-64.	65
4.2	GCF as a Percentage of GDP, 1951-62	71
4.3	Percentage Contributions of Components of GCF, 1951-61	73
5.1	Laventille Swamp (diagrammatic)	115
6.1	Plan of Port-of-Spain Harbour, 1960	139.

LIST OF MAPS

Map		Following page
1.1	Eastern Caribbean	1
1.2	Topography of Trinidad and Tobago	pocket
1.3	Geological Relationship between Trinidad, Tobago and Venezuela	6
1.4	Geology of Trinidad and Tobago	8
1.5	Economic Geology of Trinidad	10
1.6	Annual Rainfall of Trinidad and Tobago	12
1.7	Natural Vegetation of Trinidad and Tobago	14
2.1	History of Settlement and Land Use in Trinidad	29
2.2	Population Density by Ward in Trinidad and Tobago	30
2.3	Ethnic Influences by Ward in Trinidad and Tobago	30
3.1	Land Use in Trinidad and Tobago	40
3.2	Ocean Depths off Trinidad and Tobago (in fathoms)	44
4.1	Marine Drilling - Trinidad Off-shore Areas	93
Appendix III	Communication Network of Trinidad.	

CHAPTER I

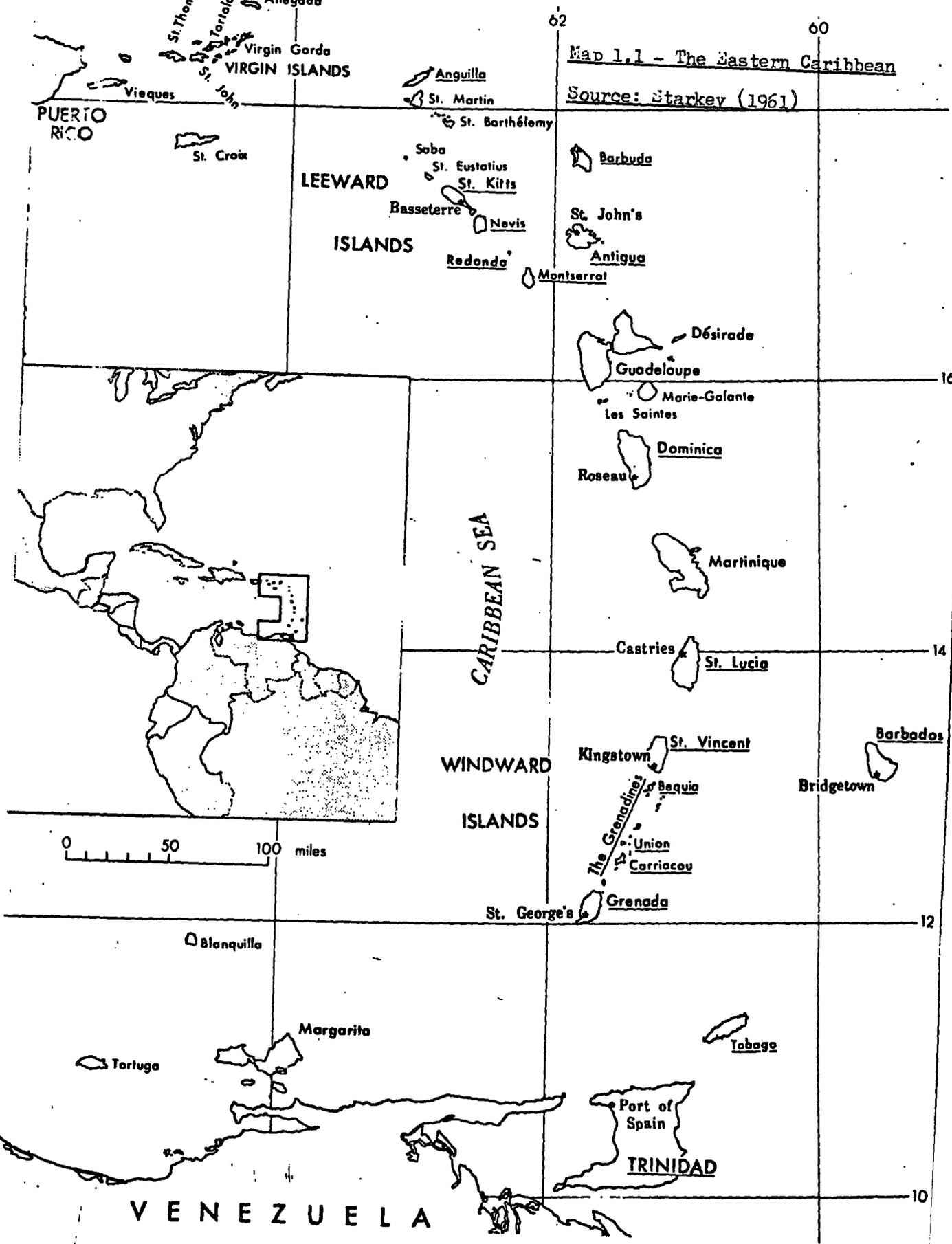
PHYSICAL FEATURES

Location: Trinidad and Tobago are the most southerly islands of the Lesser Antilles. Trinidad is only seven miles east of Venezuela at the closest point, while Tobago lies just twenty miles north-north-east of Toco, Trinidad (see map 1.1). Scarborough is over 80 miles by sea from Port-of-Spain. The route passes about a mile off the north coast toward Toco, before continuing on the shortest course to Scarborough. This route avoids as much of the rough seas between the two islands as possible. The journey takes approximately ten hours by coastal steamer going north, while the south-bound trip takes eight hours. In addition, a fairly efficient air service completes the 45-mile trip from Piarco to Crown Point in fifteen to twenty minutes (see also map 1.2 in pocket).

Although not as important a centre of inter-island routes as is Antigua or Barbados, the country is a key junction in long-distance international communication links. Port-of-Spain is a principal port-of-call for sea traffic between eastern South America and the eastern seaboard of North America, and, to a lesser extent, for sea routes between Europe and South America. The significance of Piarco as a centre of international air traffic lies in the considerable volume of air traffic leaving North America for

Map 1.1 - The Eastern Caribbean

Source: Starkey (1961)



PUERTO RICO

Virgin Gorda
VIRGIN ISLANDS

Anguilla
St. Martin

LEEWARD ISLANDS

Saba
St. Eustatius
St. Kitts
Basse Terre
Nevis
Redonda

Barbuda
St. John's
Antigua
Montserrat

Désirade
Guadeloupe
Marie-Galante
Les Saintes
Dominica
Roseau

CARIBBEAN SEA

Martinique

Castries
St. Lucia

WINDWARD ISLANDS

Kingstown
St. Vincent
Bequia
The Grenadines
Union
Carriacou
St. George's
Grenada

Barbados
Bridgetown

0 50 100 miles

Blanquilla

Margarita

Tortuga

Tobago

Port of Spain
TRINIDAD

VENEZUELA

eastern South America. Piarco is less important as a centre of traffic between Europe and South America because the volume here is smaller. Moreover, the French and Dutch airlines use islands in the French and Netherlands Antilles as re-fuelling stations, further reducing the importance of Piarco along this route.

The location of the country at strategic crossroads between North and South America and between South America and Europe (with minor incidental links to Africa, Asia and Oceania) has been significant in giving it a more diverse cultural expression than that of the neighbouring islands.

Its strategic location was recognised by the United States of America during World War II, when that country's anti-submarine Naval Base was developed to interrupt German action in the mid-Atlantic.

Topography: The physical structures of the islands of Trinidad and Tobago bear vivid contrast with each other. Whereas Tobago's terrain is dominated by a central core of uplands called the Main Ridge, a pattern which resembles most of the other islands of the Lesser Antilles, Trinidad's terrain shows striking similarity to that of Venezuela. The larger island contains three main high-land complexes running roughly parallel to each other (see map 1.2).

In Tobago, the "Main Ridge reaches a uniform height . . . without any outstanding summits or peaks."¹ The land between 1,500

and 1,900 ft. on the ridge falls away to a low-lying and relatively gently rolling landscape in the southwest, while the mountains and hills are much closer to the sea in the north and northeast. The slope on the leeward side is steep compared with the more gentle windward flank with its broader valleys and more mature drainage basins.

Trinidad's topographic features are rather more complex. The Northern Range, rising to 3,000 ft., is a continuation of the eastern branch of the Andes, via the Paria Peninsula of Venezuela. The plains and rolling hills south of the Northern Range, along with the shallow Gulf of Paria, constitute an extension of the Orinoco Delta lowlands.

Trinidad consists of three highland complexes and four main plains, each of the latter having swamps as evidence of inadequate drainage (see map 1.2 in pocket). The Central Range is, for the most part, between 200 and 500 ft. above sea level, as it stretches northeast to southwest across the centre of the island. The core consists of small isolated ridges above 500 ft., the chief of which are the Montserrat Hills, the Long Mountain, and the ridge in Charuma ward from which the Navet River flows. Mt. Harris (884 ft.) and Mt. Tamana (1,009 ft.) both rise as isolated peaks.

The northern slope of the Central Range is fairly gentle,

being drained by tributaries of the Caroni River and the Oropuche River, which flow north to meet the main stream in each case. Smaller streams flow west and northwest across the Caroni Plain to drain the western side of the Range. The trough which separates the Northern Range and the Central Range is the best defined plain in Trinidad. It is in this trough that Trinidad's two largest rivers flow, the Caroni flowing west and the Oropuche flowing east. The Caroni River is Trinidad's longest (a mere 35 miles long), while the Oropuche is the widest, draining the wettest part of the island. The tributaries of both these rivers cut many deep fertile valleys into the Northern and Central Range. Some of the valleys are especially broad and are extensively used for agriculture, for example, Santa Cruz Valley.

The Northern Range is by far the most rugged mountain system on the island. Most of the range is above 500 ft. and more than half lies above 1000 ft. On many individual ridges, the land rises to over 1,500 ft. with occasional levels of over 2,500 ft. being reached. There are two peaks - El Tucuche and Cierro Aripo - which rise to over 3,000 ft. The gentle southern slope gives way to the Caroni and Oropouche basins, while on the north coast, the mountains fall off abruptly to form a rugged coastline with occasional sandy beaches (see map 1.2).

The southern highlands are a continuation of rolling

hills going south from the Montserrat Hills which separate the Oropouche basin* from the Nariva lowlands. So much of the land in this part of the island is between 50 and 200 ft. that the appearance is one of rolling hills interrupted periodically by rivulets, some of which form the basins of the Oropouche and the Ortoire. The Nariva Swamp (into which many small rivers flow), the Oropouche basin, the Cedros peninsular lowlands and the Ortoire basin are the only recognisable expanses of land below 100 ft. The Trinity Hills, which form the core of the southern highlands, provide the only ridge above 500 ft. The San Fernando Hill and other isolated peaks around Moruga also rise above 500 ft. The hilly nature of the south of the island ends abruptly at the southern coast, creating a somewhat indented coastline on which the hills suddenly give way to sandy beaches.

Unlike the other islands in the Lesser Antilles, Trinidad has fairly large areas of flat land, marred by considerable portions of swamp land.

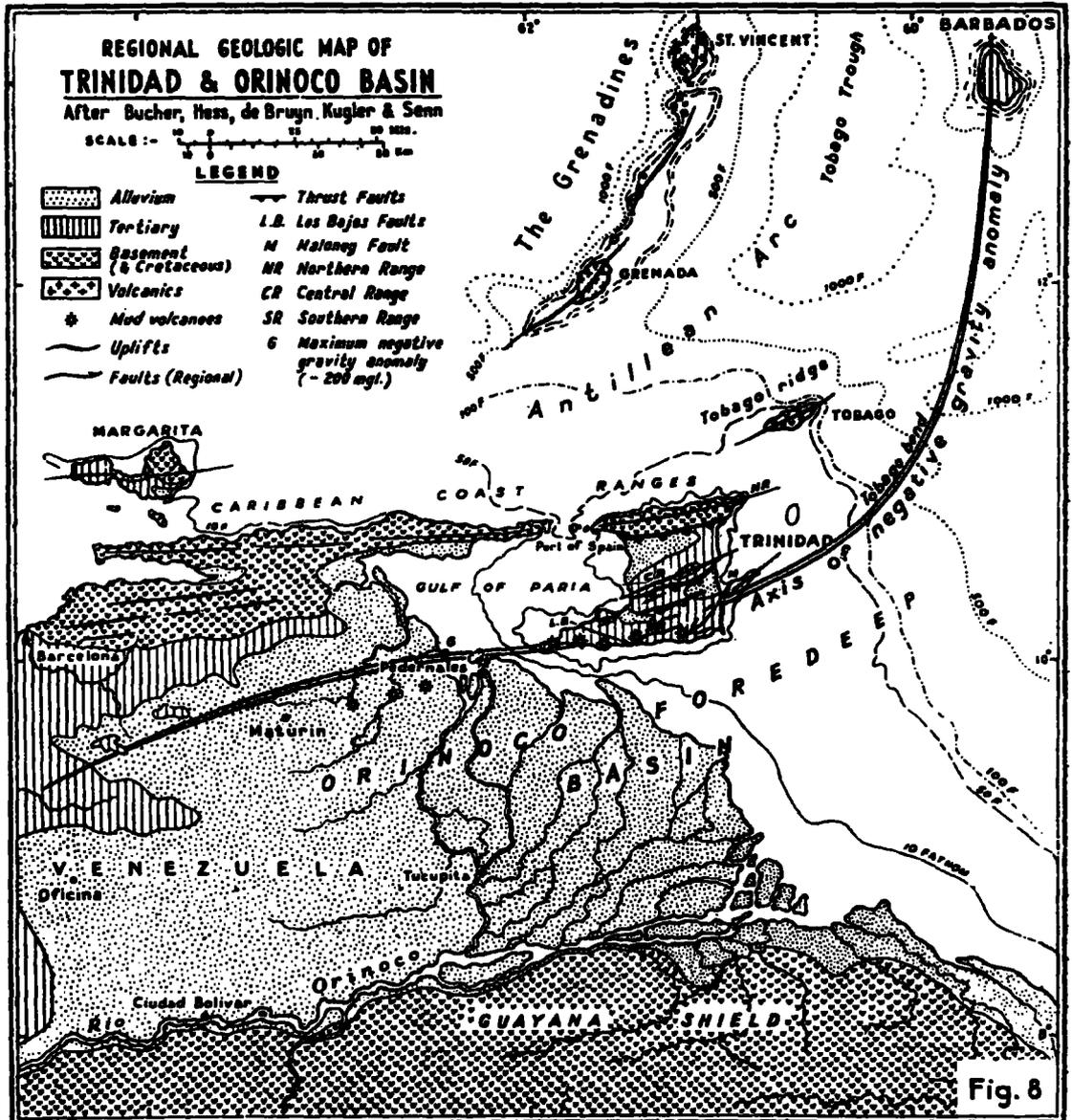
Coastal Features: The topographic features give indication of comparable coastal features (see map 1.2). The coastline of Tobago is indented with numerous bays, especially on the leeward coast where

*There are two rivers by the name of Oropouche in Trinidad, one in the northeast, and the other in the southwest of the island (see map 1.2).

the land rises steeply from the sea. On the windward coast, the towns of Scarborough, Roxborough, King's Bay and Mount St. George are all in bays sufficiently sheltered from the prevailing North-East Trade Winds. From the historical record, it is evident that there are good physical harbour facilities in many of the bays.* Tobago, however, is a small island, and, for each of these ports, the lack of a rich hinterland limits their use.

Trinidad's north coast is very rugged, with occasional sandy beaches, and it is exposed to the full force of the North-East Trades, so that the sea off-shore is always quite rough. Notice that map 1.3 indicates a depth of over 10 fathoms not far off-shore on the north coast, increasing to over 20 fathoms around Galera Point (see also map 3.2 - Chapter III), and continuing at 10-20 fathoms for much of the eastern Toco coastline. The southern coast is also quite indented, but the channel between it and the Orinoco Delta is shallow. The east and west coasts both have wide banks off-shore with depths of less than 10 fathoms for some distance out to sea. Thus, Trinidad's only coastal deep-water areas are on the north coast in a few small and fairly sheltered bays which have been, until recently, virtually inaccessible to the rest of the island. In the

*Alan Burns, in his History of the British West Indies, refers to numerous accounts of travellers of different nationalities landing and having military conquests in different bays around the island. Trade was also quite active at many of the island's ports after 1628.



Map 1.3: Geological relationship of Trinidad, Tobago and Venezuela.
Source: H. A. Suter (1960).

early days of European settlement, the island's ports were situated in the Gulf of Paria, with Port-of-Spain being the chief port. Today, as vessels become increasingly large, the port employs dredges to keep deep channels open, while smaller boats are used to load and unload larger vessels.

So far, we have surveyed the general structural and topographic features of Trinidad and Tobago. We should now account for the geological background of the territory.

Geological Background: Tobago represents an extension of the eastern arm of the Andes, as does the Northern Range of Trinidad and the Peninsula of Paria, Venezuela (see map 1.3). The geological structure of the land south of the Northern Range of Trinidad includes numerous faults, thrusts, synclines and anticlines. The Gulf of Paria is a shallow depression between Trinidad and Venezuela, its sea-bed being less than twenty metres deep for the most part.

Tobago, coming into existence later than Trinidad, is thought to have had its earliest formations (of volcanic origin) "unfolded and then metamorphosed to become the North Coast Group".² The group comprises mainly schists (as in the Mount Dillon and Parlatuvier formations, and the Main Ridge). South of the Mount Dillon formation there was an intrusion of ultramafic rocks,

followed by a period of andesitic volcanism, during which time the volcanic group was formed (see map 1.4). An extensive diorite batholith and a "number of minor andesitic dykes"³ intruded the island, causing considerable contact metamorphism. During the Tertiary Period, there was a marine submergence, which resulted in the sedimentary deposits of soft mudstone and shale in the Rockley Bay area. The island was again uplifted, only to be resubmerged in the Quarternary Period. It was during this Period that the extensive coral formations developed around the island, covering most of the Rockley Bay deposits and leaving several volcanic inliers as off-shore islands.

Recent sediments are also in evidence, especially around the coast. There are silt, gravel and alluvium deposits at river mouths, and coral building (especially Buccoo Reef). Partly calcified and consolidated sand dunes, and lagoons were infilled and enclosed by peat accumulations in the swampy areas. The only faults seen in Tobago are minor ones exposed in a few sea cliffs.

Trinidad has only one occurrence of igneous rock - the Sans Souci andesite which has intruded into the Toco beds on the north coast, to form the Sans Souci Point (see maps 1.4 and 1.5). The main rock here is massive and fine-grained, with diabase texture. Some varieties contain quartz. The metamorphic effect of this intrusion is apparently small and is considered to be of

LEGEND
GEOLOGICAL FEATURES



Igneous

Metamorphic:



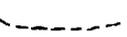
Shale



Limestone



Schists



Major faults



Mudvolcanoes

Sediments



Coral



Clay



Sandy clay



Sand



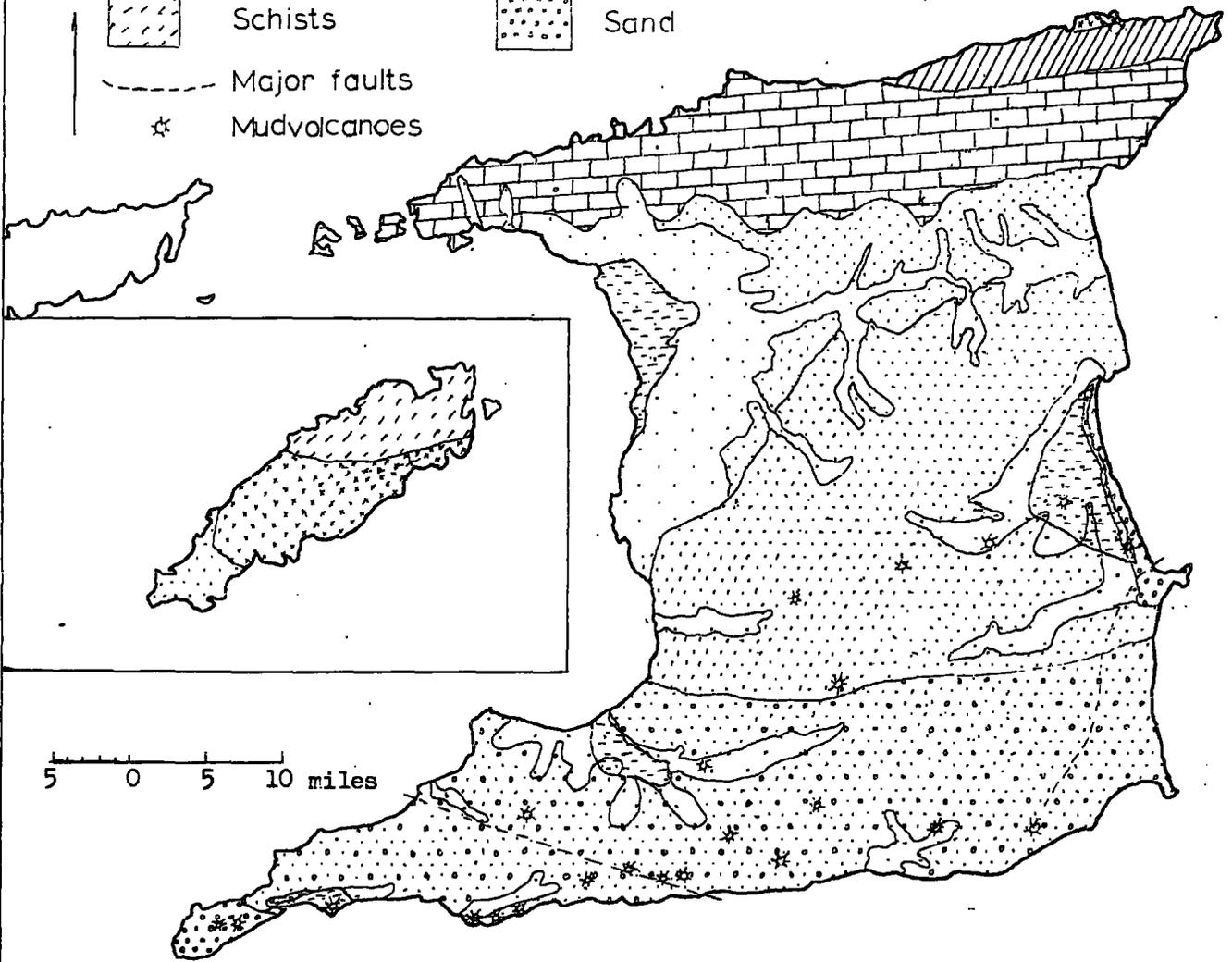
Alluvial
Terraces



Alluvium



Swamp



Map 1.4: Geology of Trinidad and Tobago
Source: Macpherson (1967), Suter (1960).

from middle to upper Cretaceous age.

Truly metamorphic rocks occur only in the Northern Range and consist of very dark grey, light grey and red weathering phyllites, intercalated with metamorphic quartzites and marble. They all belong to the epizone and contain abundant quartz veins, as well as carbonaceous matter and pyrites in powder form, both of which account for the black colour of the darker phyllites. Some phyllites feel soapy, due to the presence of sericite. A little feldspar, illite and kaolin are also found.

The porcellanite rocks of the Talparo and La Brea formations are embedded between normal sediments. They have resulted from "the spontaneous combustion of the lignite layers started by the heat of oxidation of pyrites, a process . . . still active near the Godineau bridge."⁴ Consequently, these are considered to be pyro-metamorphic.

A great deal of land south of the Northern Range is made up of sedimentary rock. The trough between the Northern and Central Range is largely alluvial (as is the Orinoco Delta region), while less concentrated alluvial deposits are found scattered throughout the south of the island. The sediments are clays, silts and sands.

Numerous varieties of clays occur (viz. pure, colloidal, impure and slightly silty). In the Moruga area, pure or barren clays are commonly found between layers of sand. Clays of sandy

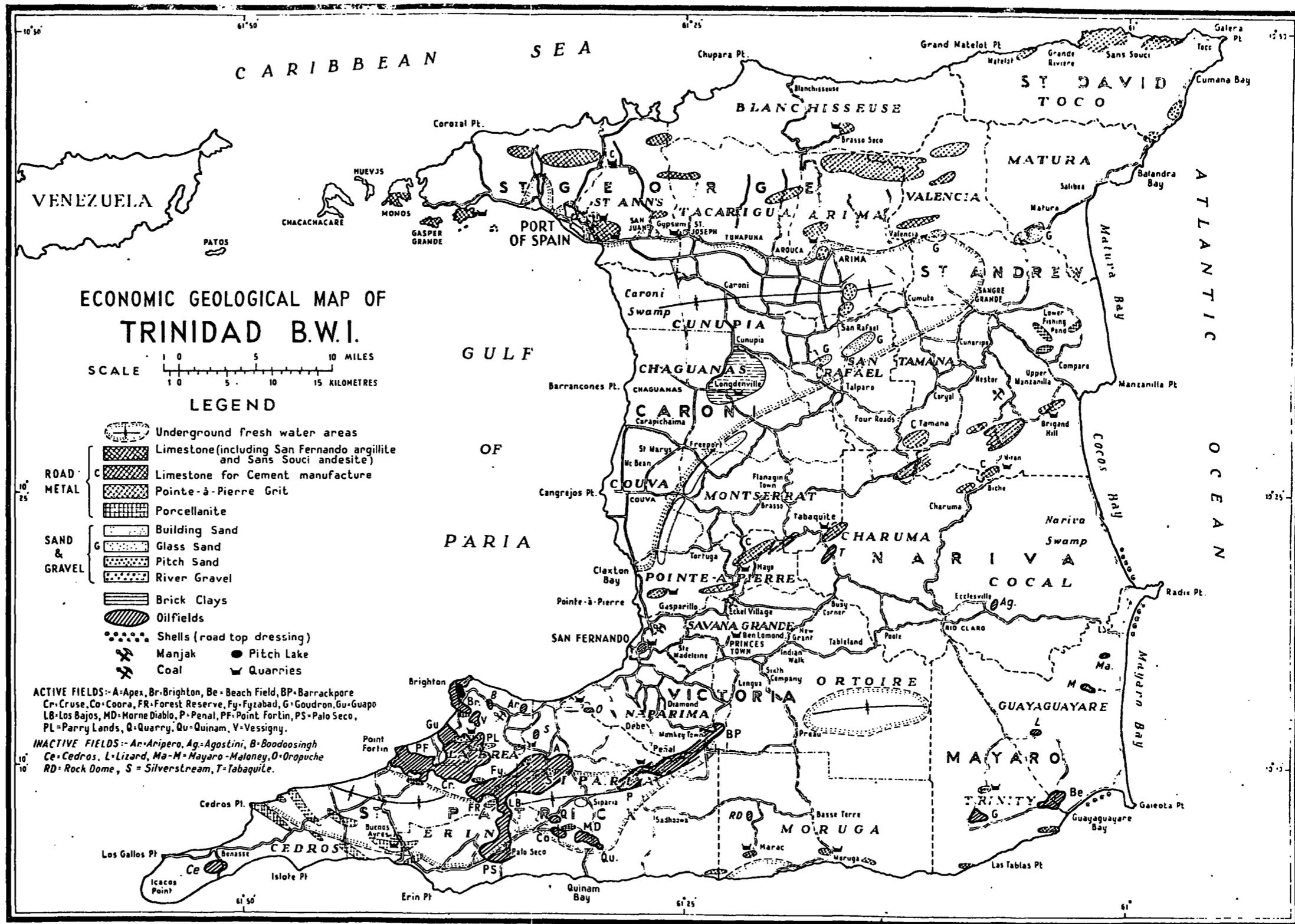
formations are, however, generally fossiliferous, and for this reason, oil companies routinely analyse all available clay residues. Illite and kaolinite minerals tend to be dominant in colloidal clays of low resistivity.

"Silts can be slumped and are often massive,"⁵ occurring sometimes in outcrops. They generally contain a fair amount of lime, in the region of 15% to 30%.

The three main types of sand found are: (i) the Nariva sands, some of which have a succharoidal texture and a siliceous matrix; (ii) the Herrera sands, which vary from conglomerates to fine sand and may be either soft, friable or hard with abundant lignite partings. They are layered, and the cementing material is usually calcite. (iii) The Moruga sands are also layered, though occurring in impure series of cycles, with about 8% colloidal clay partings and matrix on an average.

In southern Trinidad there are numerous active mud-volcanoes (see map 1.3), from which mudflow emanates to form dykes. There are, in addition, hydrocarbon, clay, sand and silt dykes, of which the hydrocarbon dykes are of some economic significance.

Map 1.5 shows the economic geology of Trinidad. Asphalt occurs in La Brea, and along with crude oil, natural gas and quarrying material, constituted the impetus for the earliest mining activity in the territory. Other hydrocarbon rocks include manjak,



Map 1.5: Economic Geology of Trinidad.
Source: Suter (1960), Appendix.

pitch sand and oil shale.

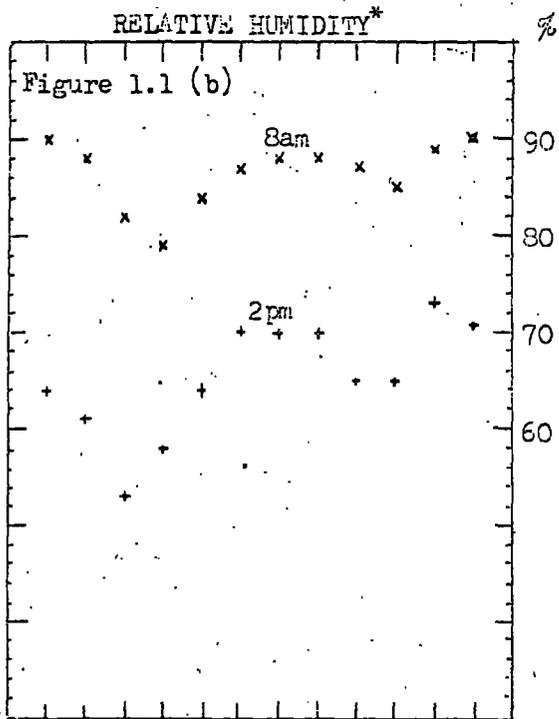
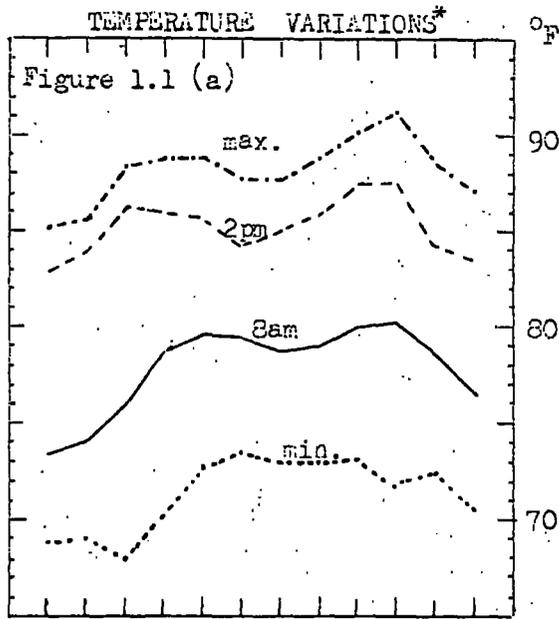
Limestone is the most important quarrying material. Two main types may be distinguished, the harder and more desirable being the blue limestone of the Northern Range. The yellow limestone, chiefly mined in the Central Range, is of an inferior resistivity.

So far, we have surveyed the general structural and geological features of Trinidad and Tobago. The interrelationship of geology, relief, climate and vegetation have been responsible for the edaphic and ecological systems. These have in turn been affected by man's utilisation of the land, and we must now consider the elements involved.

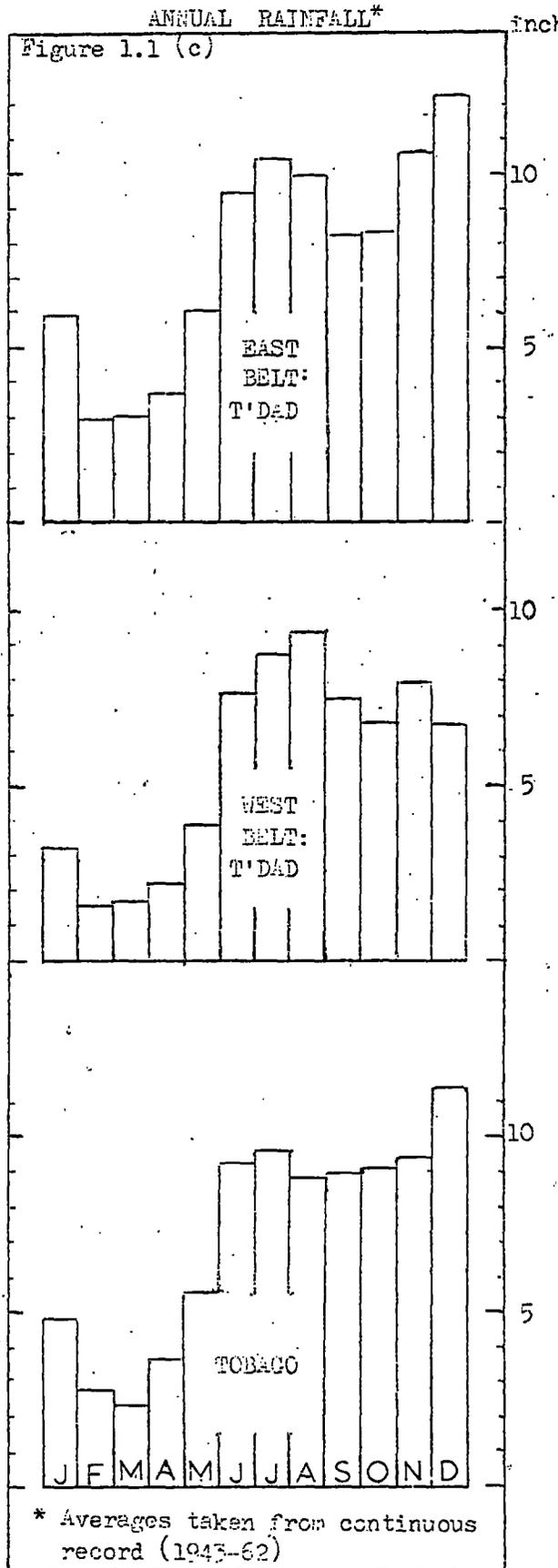
Climate: Both Trinidad and Tobago receive abundant rain on their east coasts. The prevailing North-East Trade Winds blow in across the ocean, bringing with them moisture which is deposited in the form of relief rain. Such rainfall is common, but in the latter half of the year, when the relative humidity tends to be higher (see fig. 1.1), convectional rain becomes relatively more significant. The months from January to May are generally the driest, but some parts of the country are drier than others.

The northeast sections of both Trinidad and Tobago receive the most rain during the year, the maximum being recorded on the highest land (compare maps 1.2 and 1.6). It is estimated

Figure 1.1 - CLIMATE:



Source: Central Statistical Office:
Annual Statistical Digest, 1962
 pp. 4-5.

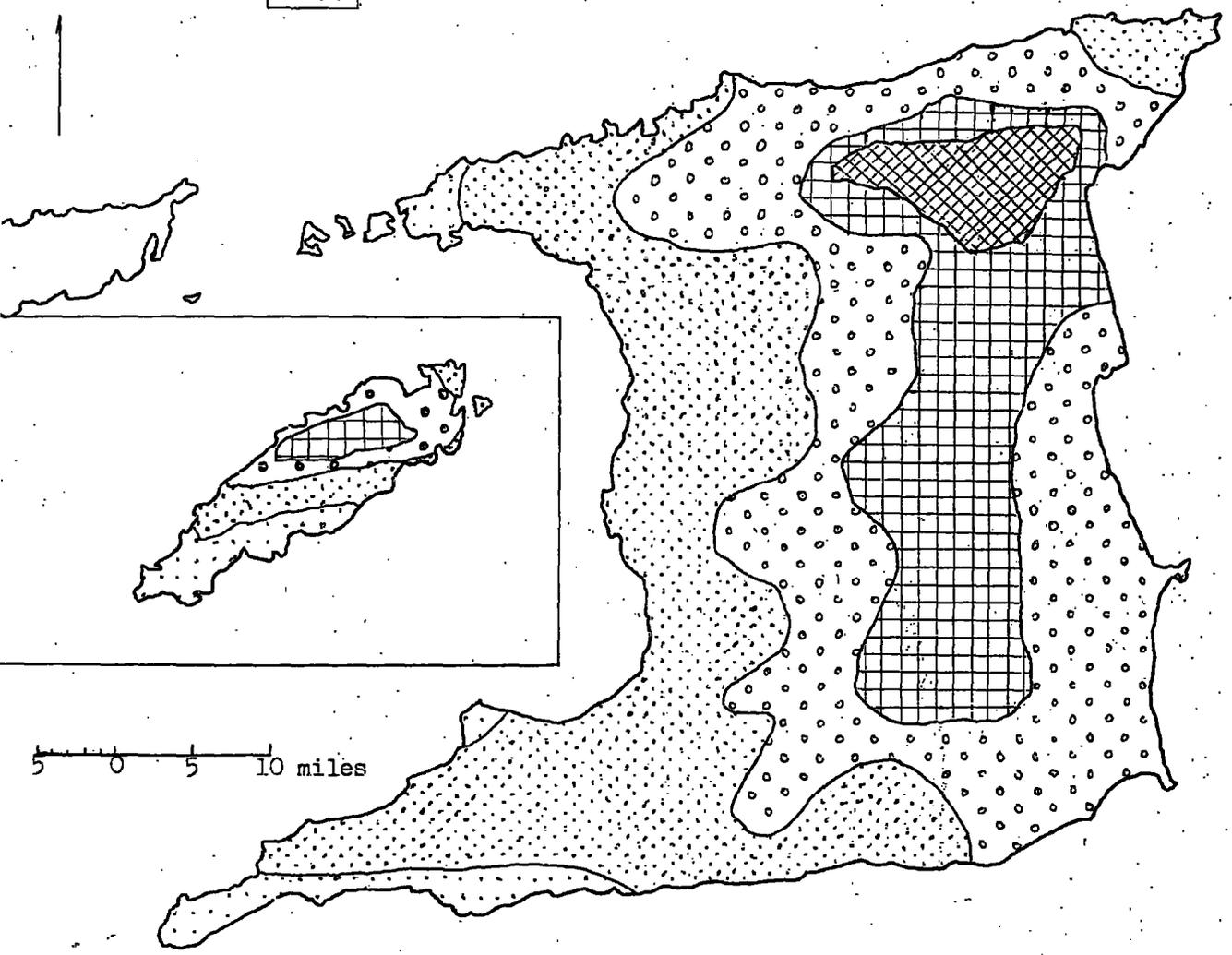
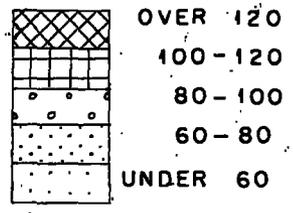


that rainfall on the Main Ridge "could vary from about 120 inches to 150 inches."⁶ Both Trinidad and Tobago are south of the regular hurricane path, but a hurricane nearby usually causes heavy showers and stormy conditions which may result in damage to crops and other property. The hurricane season is generally most intensive in August and September. Occasionally a hurricane does strike either Trinidad or Tobago, and the latter has had more such irregularities in recent history. Tobago's last hurricane was in 1963. Nine have been recorded in the last 200 years, including two since the last one struck Trinidad in 1928 (a year in which Tobago was also hit).

The coral lowlands and southern foothills of Tobago have the "driest" periods and the least total rainfall. Stations quite close together may have different amounts of rainfall over the same period. Such a phenomenon is characteristic of regions where thunderstorms are a significant form of precipitation.⁷ For instance, the annual rainfall of two stations near Scarborough registered an average of 68.6 inches and 76.8 inches over a recent 26-year period, compared with 119 inches and 95.3 inches recorded by stations on the central windward coast and the north leeward coast, respectively, for the same period. Similar contrasts are experienced in Trinidad, whose east side, and especially the eastern highlands, gets much more rain than the western coast, with the

LEGEND

ANNUAL RAINFALL IN INCHES



Map 1.6: Annual Rainfall of Trinidad and Tobago.

Source: From Trinidad and Tobago Town and Country Planning Office.

exception of the area around La Brea (see map 1.6 and fig. 1.1).

The monthly mean temperature is more uniform in each island, but the diurnal range in Tobago tends to be less than in Trinidad, a factor which is due largely to a greater cooling effect after sunset in the latter. Consequently, Trinidad's range is about 16.5°F, while Tobago's is about 9°F (see fig.1.1).

The diurnal range influences the temperature of the ocean less than it does that of the land, with the result that, while the land is warmer than the sea, the convectional currents in action over the land cause a sea breeze which reaches maximum intensity during the early afternoon when the temperature differences are greatest. As the temperatures cool later in the day, the reverse effect sets in so that land breezes are common at night. Such a phenomenon is experienced mostly near the sea coast and could itself influence the prevailing winds.

Natural Vegetation: The tropical rain forest type of vegetation is the most common vegetation type found in Trinidad and Tobago. In its virgin state, such natural vegetation probably "covered over 90%"⁸ of the territory. By the 1930's, only 40-50% of the land was under virgin forest. Today it is still less. This type of vegetation needs an annual rainfall in excess of 50-60 inches; there are, in addition, other significant modifying factors, such as drainage and evapotranspiration, and to a lesser extent, wind,

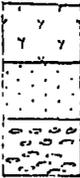
slope and soil fertility.

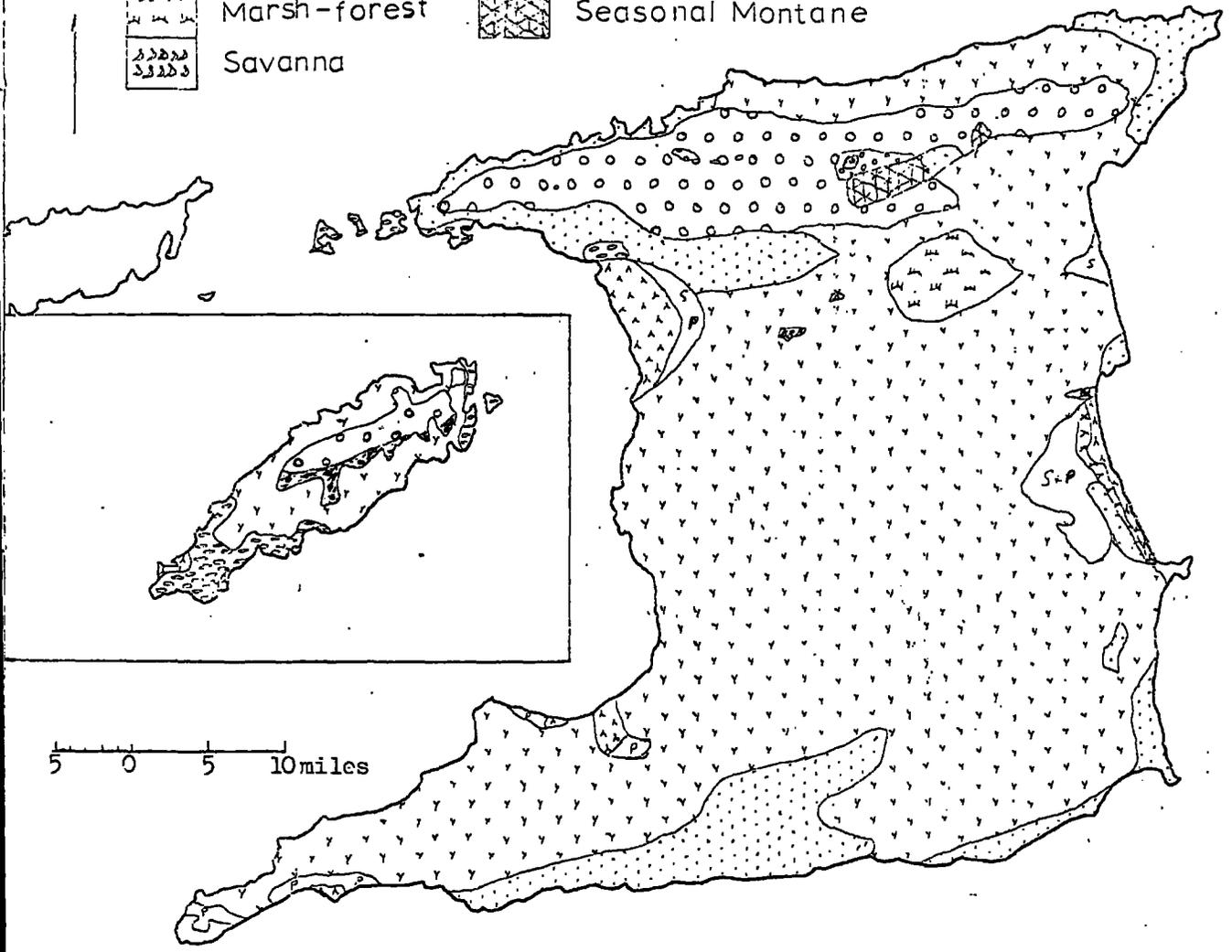
Throughout most of the country, there is a distinct dry season of at least three months. Consequently, the majority of forest stands are seasonal types. Some of the lower montane rain forest types occurring in the Northern Range of Trinidad and much of the Tobago uplands are also seasonal, but the distinction is made (see map 1.7) on the basis of exposure to the prevailing winds and the resulting average height of the trees.

Seasonal formations are conveniently divided into three main categories, assuming common seasonal drought, but with varying degrees of soil moisture retention, rainfall distribution, and topography. Thus, the categories evergreen, semi-evergreen, and deciduous seasonal forests exist within the varying combination of factors (drought, topography, soil permeability, conductivity, and water retention). Rainfall tends to be the most decisive factor, in that evergreen seasonal forests normally are in the areas of highest rainfall; deciduous forests are in the least rainy districts or where the dry season is most severe; at the same time, semi-evergreen forests are subject to trends within the extremes. One notable exception, however, is the semi-evergreen forest found on limestone outcrops in the Central Range, an association resulting from the free drainage found in the limestone soils.

Montane formations are of relatively great economic

LEGEND
NATURAL VEGETATION

<p>Seasonal Forest: Evergreen</p> 	<p>Montane Forest: Lower Montane</p> 	<p>Swamp: Swamp-forest</p> 
<p>Semi-evergreen</p> 	<p>Montane</p> 	<p>Palm Swamp</p> 
<p>Deciduous</p> 	<p>Elfin Woodland:</p> 	<p>Herbaceous Swamp</p> 
<p>Marsh: Marsh-forest</p> 	<p>Seasonal Montane</p> 	<p>Mangrove</p> 
<p>Savanna</p> 		



Map 1.7: Natural Vegetation of Trinidad and Tobago.
Source: From Trinidad and Tobago Town and Country Planning Office.

importance to forestry in Trinidad and Tobago. In Tobago, most of the forest reserves are of this formation. These groups of forests are especially interesting in that each forest type has more sharply defined areal limits in the highlands than on the lowlands, the boundaries being defined by altitude. The lower montane rain forests are found at heights above 800 ft. both on the Main Ridge in Tobago and the Northern Range in Trinidad. Existing in a region of no seasonal drought, of continuously available and often abundant moisture coupled with good drainage and sub-tropical temperatures, the stands are evergreen.

In Trinidad there is generally a transition stand of semi-montane forest at 1,800-2,500 ft. between the lower montane and montane forests. This type of stand tends to occur where exposure to the prevailing winds creates a cloud cap or mist belt on the summit of peaks about 1,800-2,000 ft. Due to the effect of altitude on temperature and vegetation, the semi-montane forest provides a transition from sub-tropical to temperate growth.

The transition is not always so smooth, but montane forests are distinctly temperate, with a fairly constant average temperature of 16°C - 20°C (60°F - 68°F). This vegetation belt is generally found above 2,500 ft., with a canopy somewhat lower than the forests further down the slope. In the upper extremities the growth becomes noticeably stunted, giving rise to elfin woodlands.

In the montane forests, as in the seasonal forest region, the soil occasionally has significant effect on the forest growth. Thus, on outcrops of limestone in the Northern Range, the vegetation afforded is seasonal, sub-tropical stands with some deciduous growth. In Tobago, at heights above 800 ft., "igneous soils . . . dry out rapidly through winds and evaporation,"⁹ and seasonal moisture deficiency allows only xerophytic rain forest growth.

The structure of montane and seasonal forests will be discussed in greater detail under "Forestry" in Chapter III, because of their particular significance in the lumbering industry.

The seasonal forests "give way to marsh and swamp types in areas of very flat depressed topography and to littoral woodlands along the coast."¹⁰ The marsh and swamp types and littoral woodlands appear in relatively small stands in both Trinidad and Tobago, while the montane formations occupy the bulk of the Northern Range and most of Tobago.

The littoral woodlands have an easily distinguished appearance. Growing along the coast and seldom more than "a few chains inland from the coast",¹¹ they attain heights varying from small bushes to trees about 20-30 ft. They have thick shiny leaves to resist the salt spray, and often the stands show evidence of exposure to strong winds. In such woodlands drainage is good, but where swampy conditions adjoin, they give way to swamp formations.

Marsh forests, in contrast, tend to be associated with poor soil conditions in a region of relatively high rainfall.

For further clarification we should define the terms "swamp" and "marsh". Swamps are usually in topographically depressed areas where the soil is permanently inundated. Marsh forests are found where the terrain is flat and not necessarily depressed. There is an impermeable subsoil which results in poor internal drainage. The seasonal rainfall results in alternate waterlogging and desiccation of the soil.

The swamps occur near the coast, as a result of internal drainage which collects in a given area and is often made salty, either by wind-borne spray or, more often, by tidal inundation by the sea. There is, therefore, a variation in the degree of salinity of the soil, and this is reflected by the vegetation. Three types of growth are found in the fresh-water swamps: swamp forest, palm swamp and herbaceous swamp, while mangrove grows in brackish water. The mangrove woodland, therefore, is closest to the coast.

Fresh-water swamp growth is quite diversified. The swamp forests are the most luxuriant, growing in the greatest depths of fresh-water inundation (from a few inches to three feet). The stands are completely evergreen, having a "closed and even tree canopy at about 60 ft. with no lower stratification".¹² The palm swamp, inhabiting land under similar depths of water, consists of

scattered palms about 100 ft. tall with an undergrowth varying from scrub to high forest about 60 ft. The palm swamp tends to give way to herbaceous swamp as the depth of inundation increases to four or five feet.

Marsh formations consist of marsh forests, palm marsh and savanna. The stands are quite distinctive in appearance. Above the canopy (about 80% palms) of 10-30 ft. emerge scattered trees (50% palms) of 70-80 ft. in the marsh forest. The forest generally gives way to palm marsh where soil drainage is less adequate in the latter than in the former, though not as bad as conditions that afford the short grass and shrubs of the savanna. In the palm marsh, the scattered palms are more dominant and shorter (50-60 ft.), while the understory consists of dense bushes.

Soils and Land Use: Since the rain that falls is generally of a thunderstorm variety, a great deal of soil erosion takes place. Land-slides, sheetfloods and creeping soil on slopes are among the major effects of heavy rain. Consequently, the valleys and flood plains, rich in alluvial material, tend to be the most intensively-used agricultural lands. Where these soils are deep and well-drained in damp valleys, they constitute ideal conditions for cocoa cultivation. As the rolling hills give way to more flat land or gently-rolling lowlands, sugar cultivation becomes more important, as long as drainage can be maintained (usually by artificial

means). Where the drainage is poor, the rainfall fairly plentiful, and the soil is of a clay formation, rice is often cultivated. Citrus production tends to infringe upon, and take over, cocoa lands and marginal sugar areas. The coconut is the other major crop limited to rather specialised conditions. It thrives best in well-drained, coarse-textured, sandy soils, which are most common along the east coast, on the narrow fringe of the north coast in isolated spots, and in the Cedros area where artificial drainage is often necessary (compare maps 1.2, 1.4 and 3.1). In the Cocal district, a sandspit standing adjacent to, but separate from the swamp lands provides ideal conditions for cultivating coconut: heavy rainfall, windy conditions and a well-drained soil. In Cedros, drainage of the sandspit is somewhat more difficult, but the presence of the swampy conditions provides a richer, dark soil which is less abundant in the Cocal district. The rainfall in the Cedros peninsula, although sufficient, is almost marginal for coconuts.

In Tobago, there is similar correlation between the topography, climatic conditions, and soil features. Thus, alluvial deposits exist in drainage basins, although the alluvium is not as deep as in the Northern Range valleys. The comparable soil conditions also give rise to similar land-use patterns, so that coconuts are found on the sandy coastal lowlands and cocoa in the

fertile valleys. On the gentle slope at the southern end of the Main Ridge is a rich volcanic soil widely used for crop-raising.

Land-use methods are directly responsible for a large proportion of the soil destruction in both Trinidad and Tobago. Located in a tropical rain forest belt, the soils are heavily eluviated, to the extent that much of the fertility is destroyed. Such a factor is however, less important than the damage done by growing certain crops. The worst offenders are root crops and other market-gardening products, and their adverse effects may be attributed to the methods of cultivation and the chemical demands made by the particular crop on the soil. These problems will again be referred to in Chapter III, but it would be appropriate to briefly introduce them here.

The land is often cleared for the planting of legumes and root crops. This is usually done during the part of the year when the long, arduous task is least likely to be interrupted by rain. By the time the rains come, much of the land has been laid bare, and soil lost by run-off could be very great, especially on slopes. The extent to which sheet run-off affects the top-soil depends, of course, on the soil texture. Accordingly, if it has a high clay content, it would be more easily dissolved or held in suspension than the coarser sandy soils. Tropical soils do not retain their fertility as well as do temperate soils, so that fields

need to be left fallow for many years after extensive use, and fertilizer is widely applied while the soils are in use.

There are many other causes and effects of soil erosion. The damage done by animals' hooves is not negligible, and, together with the practice of tethering animals to stumps of trees which will eventually be torn loose from the earth, a considerable proportion of the topsoil on a given plot of land could be prepared for swift and easy transport when the rains set in.

Not only does soil damage affect farm land, but the road system is also vulnerable. In the rural districts of both Trinidad and Tobago, many paved roads have adjoining unpaved roads which become baked during the dry season. Their surfaces become loose from cart traffic which is especially destructive to such conditions; and after a heavy shower, if the terrain is such that water flows along the unpaved road and onto the paved road, accumulated sand and gravel on the latter causes great damage to its surface. Furthermore, unpaved roads provide hazardous travelling conditions during much of the rainy season.

The sea is becoming an increasingly serious agent of erosion in parts of Trinidad. Along the southern and southwestern coasts, there often are cliffs of a soft sandy-clay texture. Such outcrops are constantly being cut back by the rising tide, and in some places, such as Point Fortin, the coastline recedes at an

Table 1.1

Trinidad and Tobago - Land Utilization

Built-up Areas (Residential and industrial).....	97,250	acres
Swamps and inland waters.....	26,300	"
Forest Reserves, other State and private forests...	575,000	"
Abandoned tree crops, bush and secondary growth....	<u>124,650</u>	"
Total Non-Agricultural.....	823,200	"
Agricultural Areas in cultivation.....	330,000	"
Pastures, semi-derelict crops and shifting cultivation.....	<u>113,850</u>	"
Total Agricultural.....	443,850	"
Total area of Trinidad and Tobago.....	1,267,050	acres

Source: Trinidad and Tobago Central Statistical Office: Annual Statistical Digest, 1964, Port of Spain, p. 130.

alarming rate.

Just 26% (or 330,000 acres) of the total land area of Trinidad and Tobago was being cultivated prior to 1958 (see table 1.1), in addition to about 100,000 acres being used in shifting cultivation. Apart from this, there was not much other land suitable to be brought into cultivation. The Tropical Rainforest type of climate* on an island of such diverse topographic features presents a shortage of soils sufficiently well drained, yet not over-leached, for agricultural purposes. Nevertheless, the islands are too small and the landscape not sufficiently rugged to make possible swift-flowing rivers with a large enough volume of water to be harnessed for hydro-electric power. The vein minerals found are of no economic value, and the petroleum and natural gas obtained are drilled at very high costs to the companies involved. Asphalt and quarrying represent the only other form of mineral wealth. Thus, the physical features of Trinidad and Tobago impose certain restrictions on the country's scope for economic development. Chapter II will introduce the human resources, after which there will be different, but relevant approaches to the economy prior to the Development Programme (Chapters III and IV).

*According to Koppen Classification.

FOOTNOTES TO CHAPTER I

1. Niddrie, David L.: Land Use and Population in Tobago. (London, Geographical Publication Ltd., 1961), p.1
2. Ibid., p.3.
3. Ibid., p:5.
4. Suter, H.H.: The General and Economic Geology of Trinidad. 2nd ed. (London, 1960) p.43.
5. Ibid., p.46.
6. Niddrie, op. cit., p.7.
7. United States Department of Agriculture: Climatic Summary of the United States of America, Section 38 - Western Nebraska. (Washington D.C., 1940), p.38.
8. Marshall, R.C.: The Physiography and Vegetation of Trinidad and Tobago. (Oxford, 1934).
9. Niddrie, op. cit., p.11.
10. Beard, J.S.: Natural Vegetation of Trinidad. (Oxford, Clarendon Press, 1946), p.37.
11. Ibid., p.50.
12. Ibid., p.44.

CHAPTER II

POPULATION

We cannot effectively consider land use without becoming aware of its correlation with settlement patterns. Agricultural land use reveals rural settlement trends; while industrial land utilisation and the mere promise of industrial potential strongly influence the urban complex. To better appreciate the settlement pattern of Trinidad and Tobago, we need to approach it from the angle of the country's historical background, population growth, population structure and composition, and later, the movement of groups and their interaction.

Historical Background: The abolition of slavery in the British colonies in the 1830's had an unusually profound effect on the economy of Trinidad. At that time, unlike Tobago and the other British West Indian islands, it had a very small slave population density. (See table 2.1 - the compensation is a fair indication of the relative value of the land, vis-a-vis its yield per acre). Earlier, after the slave trade was outlawed, Trinidad had been left with an acute labour shortage. Planters from other islands either sold slaves to planters in Trinidad, or went there themselves to take advantage of the more productive soils. For a time, until the abolition of slavery, this postponed the ultimate impact of the misuse of

a limited supply of labour, soon after which former slaves opted to acquire private land or squat on Crown Land. Immigrant indentured workers were introduced from China and Madeira in small quantities, and later in larger groups from India, to work on the estates (mostly sugar estates, but also coffee, cocoa and cotton). The pattern of immigrant labour continued until 1917, during which time a small percentage of immigrant Indians settled, helping to create the colourful composition of the Trinidad community.

Table 2.1

Slave Compensations After Abolition (1837)

<u>Selected countries</u>	<u>No. of slaves</u>	<u>Compensation</u>
Jamaica	311,070	£ 6,149,955
British Guiana	82,824	4,295,989
Barbados	83,150	1,719,980
Trinidad	20,657	1,033,992
Grenada	23,638	616,255
Antigua	29,121	425,547
Tobago	11,589	233,875

Source: Burns, Alan: History of the British West Indies. London (Allen & Unwin), 1965. p. 271.

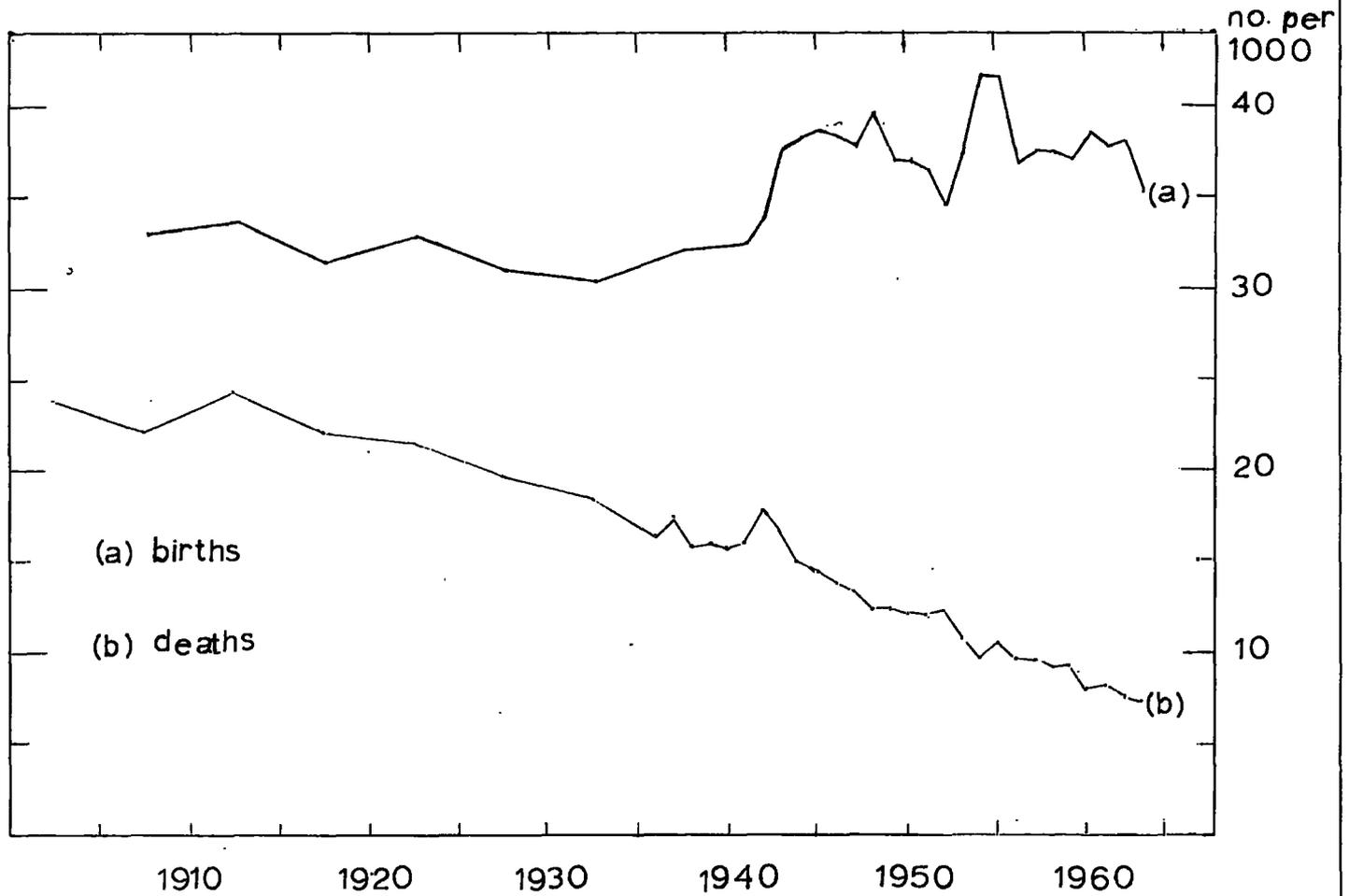
The Tobago experience was vastly different. By 1830, the soils had been virtually exhausted, as were those of most other West Indian islands with a correspondingly low yield per acre for all crops. Whereas Trinidad had been practically inactive as a plantation-export economy prior to the 1780's, Tobago had been almost

as active as the more northerly islands since the early 17th century. Thus, following the abolition of the slave trade, plantation owners had begun to move to Trinidad and British Guiana (now Guyana) in search of better land.

Earlier colonisation of both Trinidad and Tobago had resulted in the almost complete extermination of the aboriginal people by the turn of the 19th century. There were little more than 100 Caribs and Arawaks in Trinidad when the British took over from the Spanish in 1797, while in Tobago, only 24 Caribs were accounted for in 1790. Today, these ethnic strands have been absorbed into the society, but remnants of them could still be seen (in diminishing intensity) in the "mixed" element of the population (see discussion later in chapter).

Growth Trends: The population of Trinidad and Tobago increased from 73,000 in 1844 to 764,900 by 1957 - a ten-fold increase.¹ In Trinidad, however, growth was considerably more rapid than in Tobago. Consequently, in the above period, Trinidad's population had become 13 times its former size, while Tobago's population multiplied by only about two-and-a-half times. This factor is hardly surprising, since Trinidad was very sparsely populated for many decades after the British takeover (1797). Trinidad's growth rate was fairly steady until 1911 (usually over 2% per annum), after

Figure 2.1 - Birth Rates and Death Rates per Thousand of Population, 1901-63.



Source: Central Statistical Office: Annual Statistical Digest, 1964, pp. 21, 23.

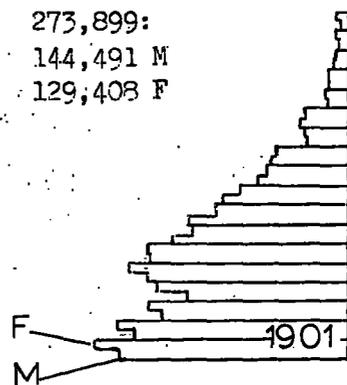
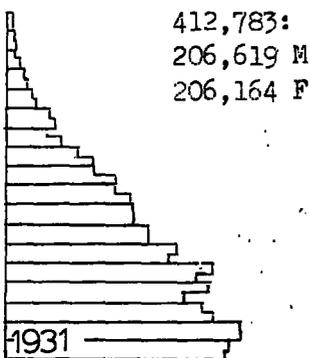
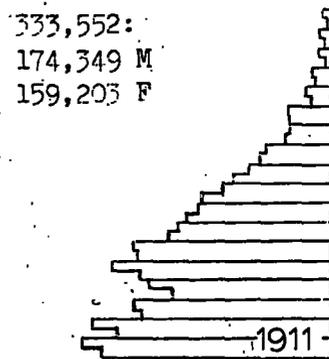
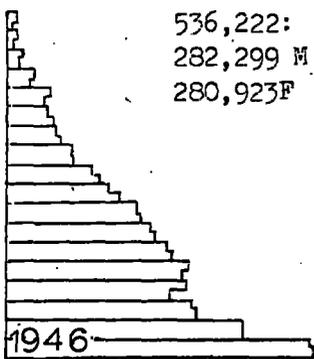
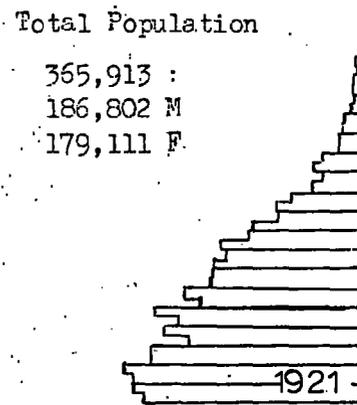
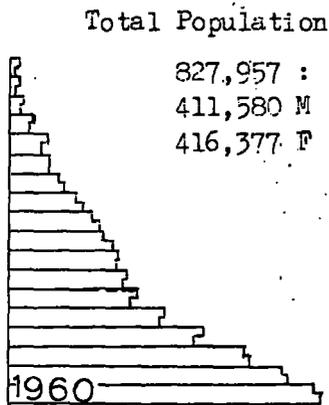
which it suddenly fell to less than 1% for the next decade, increasing again gradually to the present level.

The decade 1911-21 marked a "curtailment and eventual cessation"² of migrant workers to the plantations in Trinidad, and, with it, a new demographic phase. Henceforth, natural increase in the growth rate had been largely due to a decrease in mortality. This decrease, resulting from different factors, in turn helped to cause an increase in live births. But the most effective period of such influence seems to have been in the 1940's (see fig. 2.1). At this time the increasing efficiency of the Public Health Service brought greater control over disease, and established superior maternity care.

Composition and Structure: The growth of the population of Trinidad and Tobago was accompanied by compositional and structural changes, and again, these changes have been greater in Trinidad than in Tobago.

Some 145,000 immigrants were brought in from India to work on the plantations prior to 1917, along with the other immigrant workers from China and Madeira. The high percentage of immigration and the high death rate of the older age group produced an age structure within which a relatively small proportion was under

Figure 2.2 - Age-Sex Structures of Trinidad and Tobago at Census Surveys, 1901 to 1960.



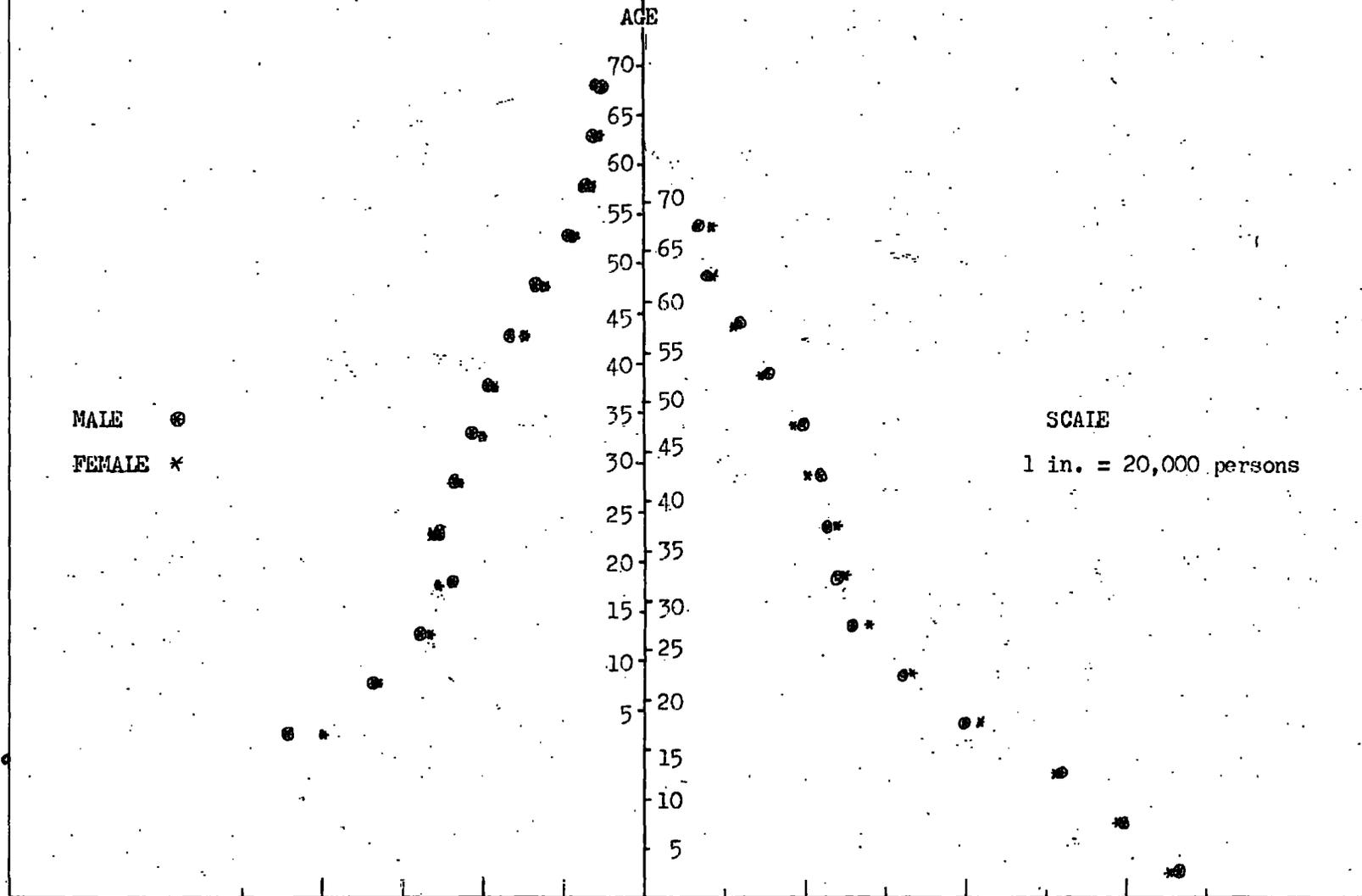
15 years and over 55 years of age (see fig. 2.2). Improved medical facilities increased the life expectancy and saved more babies, natural increase took precedence and the sex ratio became balanced. Fertility was also increased, and more babies were being born.

During the early 1940's and in the years following the war, another, though less significant factor set in - emigration. More men than women had been emigrating, while immigration (mostly from other West Indian islands) had been more balanced. A small net immigration resulted (see fig. 2.4), but the fact of net immigration was considerably more significant. This is because, whereas most of the other West Indian islands had been experiencing net emigration - which resulted in a rate of population growth well below their excess births over deaths - Trinidad and Tobago's growth rate exceeded its natural increase.*

The aim of fig. 2.3 is to illustrate the contrast between the numbers of men and women leaving Trinidad and Tobago. To create

*Some of Jamaica's population statistics provide a case in point. In 1956, the country's birth rate was estimated at 37 per 1000, and its death rate at 9.5 per 1000. Thus the birth/death increase was 27.5 per 1000. But population increase was about 16/1000. Thus 1.2% of the population evidently emigrated (according to A. H. Peck:- Social and Economic Studies 1958). In 1956, the country's population was over 1.5 million so that 1.2% would have been over 18,000. According to R. B. Davison: West Indian Migrants (1962), 17,302 Jamaicans entered Britain at that time.

Figure 2.3 - Comparing Age-Groups from 1946 and 1960 Census Statistics

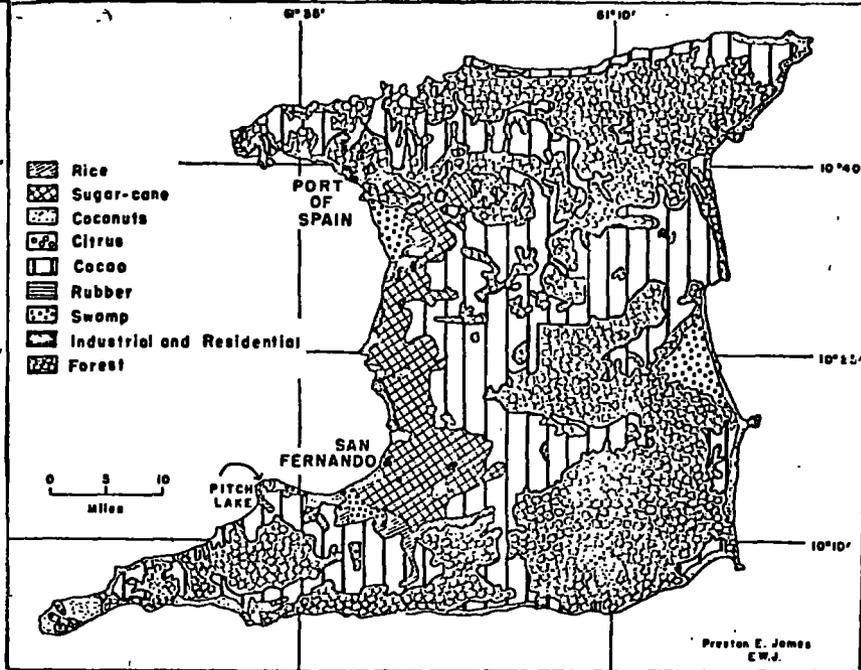
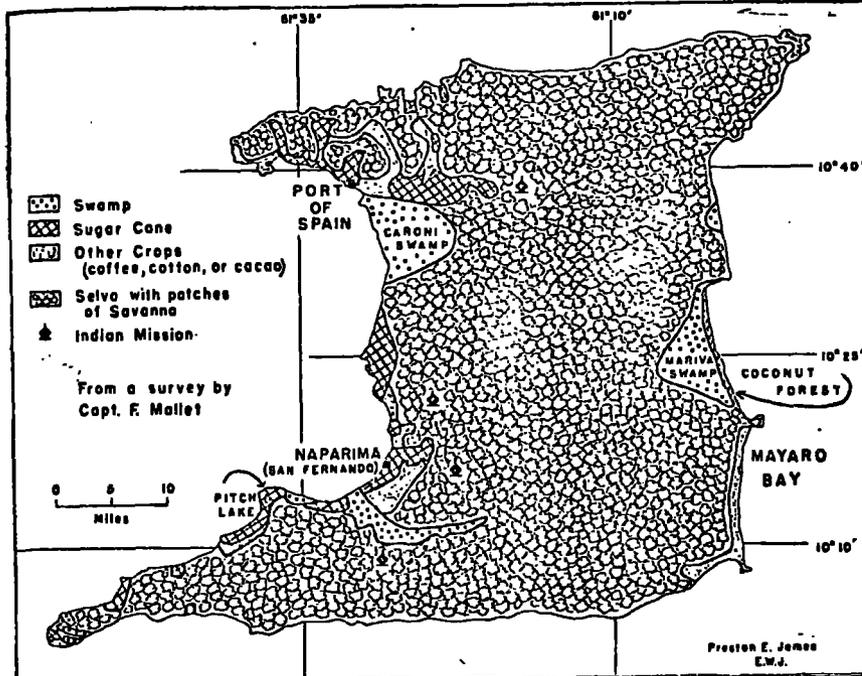


Source: Central Statistical Office: Annual Statistical Digest, 1964. p. 11.

such an effect, the age groups at the 1946 census have been staggered 14 years to be in line with the age groups of the 1960 census so that a given generation at both censuses could easily be compared side by side. Note, for example, that in the 15-to-25 age group in 1946 and the 15-to-40 age group in 1960, there was a larger group of females than males.

The sex ratio according to settlement patterns is also interesting. In this respect Trinidad was unlike most of the other developing countries and rather more like the advanced ones. In the rural districts the male population exceeded the female, while in the urban areas the females predominated.⁴ Notice in table 2.2 that there was a female majority in four wards: Diego Martin and St. Ann's (both effectively suburban Port-of-Spain), Manzanilla, (which is concentrated around the once-flourishing but still-functional urban centre of Sangre Grande), and Tobago. It should be noted, though, that Manzanilla's female majority is negligible.

Looking still more closely at the statistics, one sees that in the areas with a relatively high concentration of Indians, the male surplus was small. This may be attributed to two factors. One is that the Indians were largely more agricultural, so that women had a form of employment on the land, whereas in the rural areas of lower Indian concentration, the women of non-Indian ancestry tended more towards urban settlement (compare maps 2.2 and 2.3).



Map 2.1 - History of Settlement
and Land Use in Trinidad

Source: James (1953)

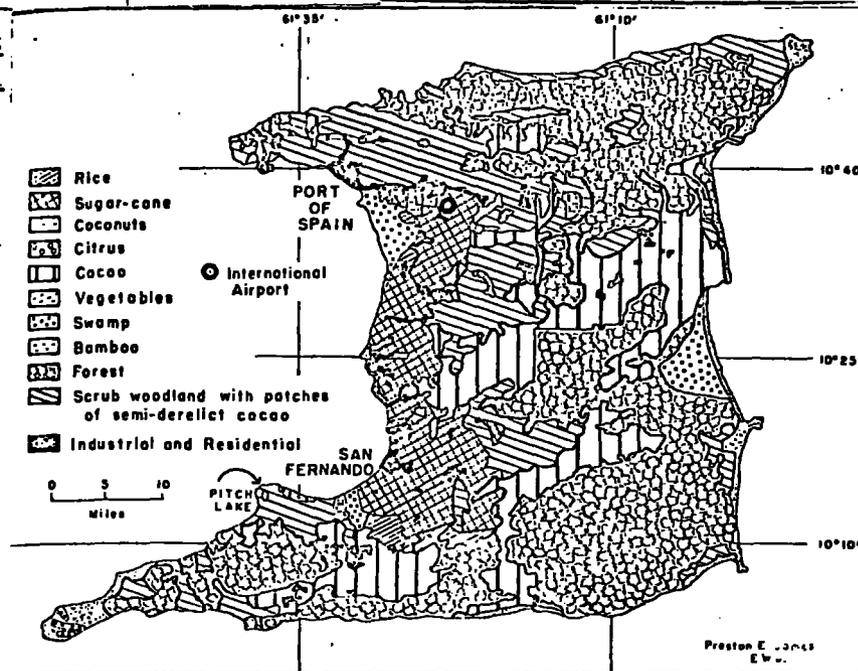


Table 2.2

Sex Ratio by County, Ward, City and Borough
number of males per 1000 females

Trinidad and Tobago		988	
Port-of-Spain*	878	Mayaro:	1162
		Guayaguayare	1121
San Fernando*	927	Trinity	1439
Arima*	938	St. Andrew:	1038
		Valencia	1163
St. George:	980	Matura	1238
Diego Martin	955	Manzanilla	993
St. Ann's	967	Tamana	1067
Tacarigua	1000	Turure	1047
Arima Ward	1039		
Blanchisseuse	1281	Victoria:	1024
San Rafael	1133	Ortoire	1020
		Naparima	1016
Caroni:	1023	Pointe-a-Pierre	1025
Montserrat	1037	Moruga	1098
Chaguanas	1023	Savana Grande	1020
Cunupia	1035		
Couva	1009	St. Patrick:	1028
		Siparia	1022
Nariva:	1083	Erin	1233
Cocal	1104	La Brea	1014
Charuma	1067	Cedros	1099
St. David (Toco)	1092	Tobago	978

*For the respective Counties (and Wards) within which the city and boroughs are located, the statistics for the latter are not included in the former. This is true of all such tables and figures derived from Trinidad and Tobago Government data.

Source: Computed from Trinidad and Tobago. Central Statistical Office: Population Census 1960. Port-of-Spain, 1961, preface.

Secondly, many of the wards with a relative Indian predominance were already quite urbanised, (see maps 2.1 and 2.3) and in these, the male surplus was lower than in the more rural areas.

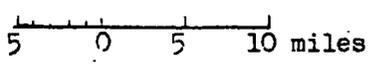
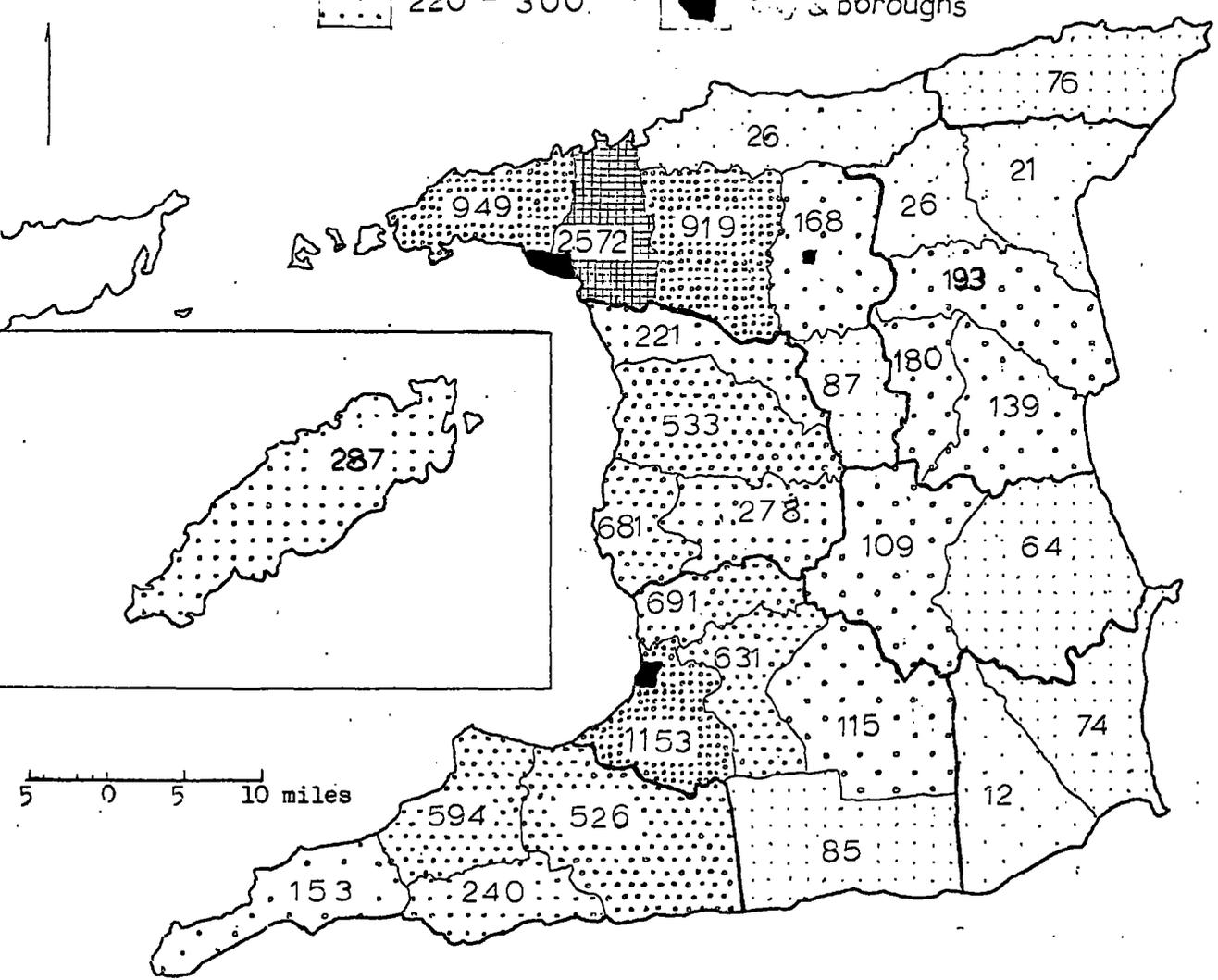
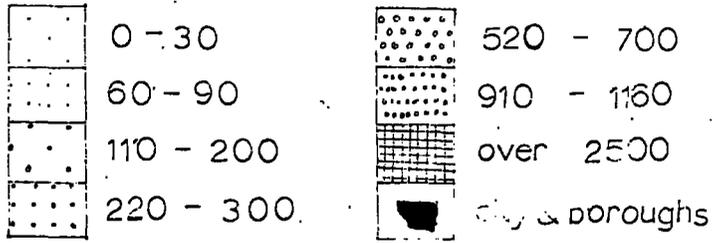
Settlement Patterns: In travelling around Trinidad and Tobago, probably the first pattern of population distribution to become apparent was that of density. Map 2.2 roughly brings out the varied densities that existed between wards.

In Trinidad and Tobago, there was a marked correlation between agricultural land use and rural population density. Given the normal pattern of agriculture, then, we may assume that the areas of sugar-cane farming had quite a high density, since sugar was so highly labour-intensive* (see later discussion on Movement). Cocoa and citrus cultivation needed less labour, while coconuts needed even less. The densities in the corresponding areas well reflected these needs.

Crop specialisation also reflected ethnic concentration patterns. Thus, Indians tended to outnumber other ethnic groups in areas of sugar production, having stayed in the vicinity after serving their indentures during the late colonial period. Some continued to work on the sugar estates, but most others cultivated

*Reference to this factor is made in Chapter I and again in Chapter III, as well as Appendix I.

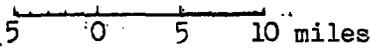
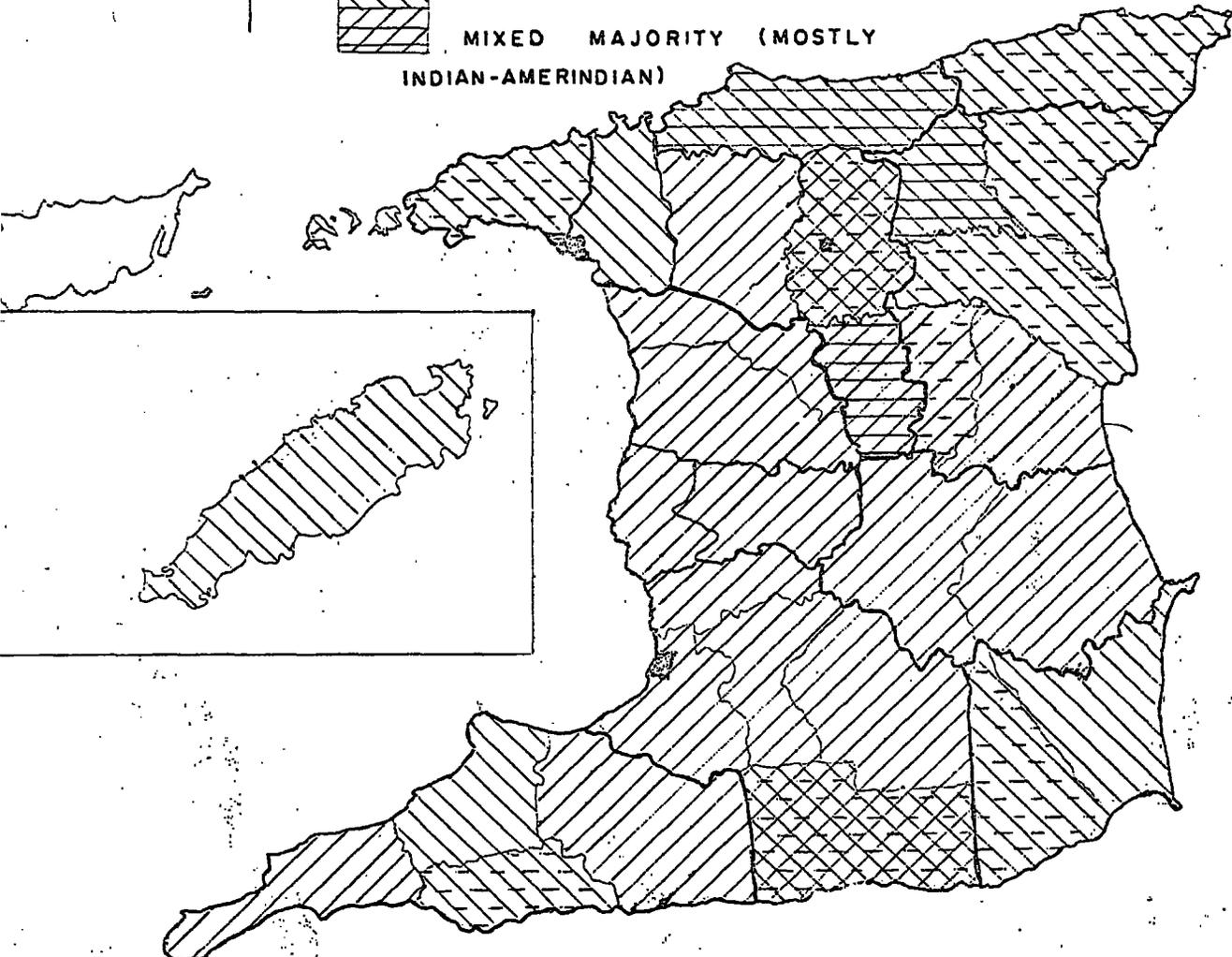
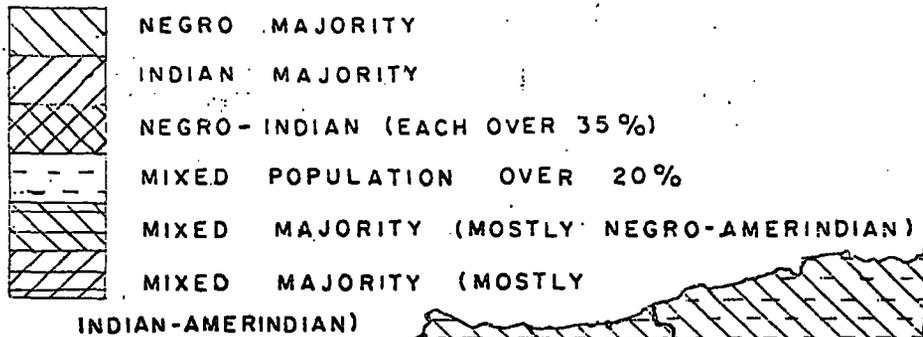
LEGEND
 POPULATION DENSITY BY WARDS
 persons per sq. mile



Map 2.2: Population Density by Ward in Trinidad and Tobago.
 Source: Population Census (1967).

LEGEND

ETHNIC INFLUENCES BY WARD



Map 2.3: Ethnic Influences by Ward in Trinidad and Tobago.
Source: Population Census (1960).

their own plots of land, many of these filtering into the marginal areas and growing cocoa, coffee and citrus. Evidence of such filtration may have been seen in Ortoire, Tamana, Turure, Charuma, San Rafael, and to a lesser extent in Moruga, Arima and Manzanilla (compare map 2.3 and table 2.3).

The urban landscape also influenced agricultural settlement. Market gardening thrived on the outskirts of the urban complex which stretched from Port-of-Spain, west to Chaguaramas, and east to Arima, as well as another complex going south from Curepe to San Fernando, and beyond to Princes Town, Fyzabad and Siparia along the main roads (see Appendix III). The small holders owned or rented the land, lived in the neighbouring towns or villages, and walked or cycled to their plots daily (compare table 2.4 with Appendix III). The plots were small, usually just one or two acres, farming is intensive, and the produce was sold daily in the market of the neighbouring town, where the largest volume of trade, by far, was on week-ends (see Appendix II to Chapter III).

The relative concentration of mixed people in the north-eastern wards is due to an original location factor. The Carib natives of Trinidad lived in this general area, and the majority of the mixed people here were partly of Carib ancestry. They were largely agricultural, but the younger generation - especially the women - were moving to the urban centres. This was a pattern which

Table 2.3

Ethnic Composition by County, City and Borough

	<u>African</u>	<u>European</u>	<u>Indian</u>	<u>Chinese</u>	<u>*Mixed</u>	<u>Syrian & Lebanese</u>	<u>Other</u>
Trinidad & Tobago	43.3	1.9	36.5	1.0	16.3	0.2	0.8
Port-of-Spain	57.8	3.5	9.0	3.1	23.5	0.8	2.3
San Fernando	47.1	3.3	25.8	1.8	20.8	0.4	0.8
Arima	34.9	0.7	15.4	2.2	44.8	0.6	1.4
St. George	48.3	2.7	26.5	0.9	20.4	0.2	1.0
Caroni	20.7	0.5	70.0	0.4	8.0	neg.**	0.4
Nariva	26.6	neg.	57.9	neg.	13.7	neg.	1.8
Mayaro	61.1	1.2	17.5	0.8	18.7	neg.	0.7
St. Andrew	35.8	0.3	38.8	0.4	23.8	0.1	0.8
St. David	70.5	0.4	5.9	0.8	21.3	neg.	1.1
Victoria	28.4	1.3	60.6	0.4	9.0	0.1	0.2
St. Patrick	42.4	1.4	42.2	0.8	12.9	neg.	0.3
Tobago	93.3	0.8	1.4	0.2	4.0	0.2	0.1

*The term "Mixed" is used to describe people whose ancestry represents more than one ethnic background.

**negligible.

Source: Computed from Trinidad and Tobago. Central Statistical Office: Population Census 1960. Port-of-Spain, 1961, preface.

Table 2.4Population Growth in Certain Towns

<u>Agricultural Town</u>	<u>1956</u>	<u>1960</u>	<u>1965</u>	<u>% increase (1956-65)</u>
Chaguanas	2900	3500	4200	45%
Couva	3100	3600	4200	35.5%
Gasparillo	3800	4800	6000	58.9%
Princes Town	6000	6700	7900	31.6%
Siparia	3600	4200	5000	38.9%
Rio Claro	1800	2200	2600	44.5%
Mayaro	1600	1800	2100	31.3%
Biche	1600	2000	2400	50%
Sangre Grande	4400	5100	6000	36.4%

(The population increase for Trinidad and Tobago for the same period was estimated at 30%).

Source: The Nation, Dec. 15, 1965 to April 22, 1966 (reprint).

was also true of the negro population in most parts of the country.

People tended to freely associate with each other across ethnic and racial lines, but they did so less readily across societal and class barriers. The phenomenon was largely attributable to Britain heritage. In fact, despite the diverse ethnic composition, the predominant cultural influence was British. The other peoples of the West Indies Federation voiced reservations about Trinidad's ethnic balance and the efforts to dispell all such doubts created a pseudo sense of nationalism.⁵

There were areas in which one particular ethnic group outnumbered the other groups but nowhere were minorities made to feel

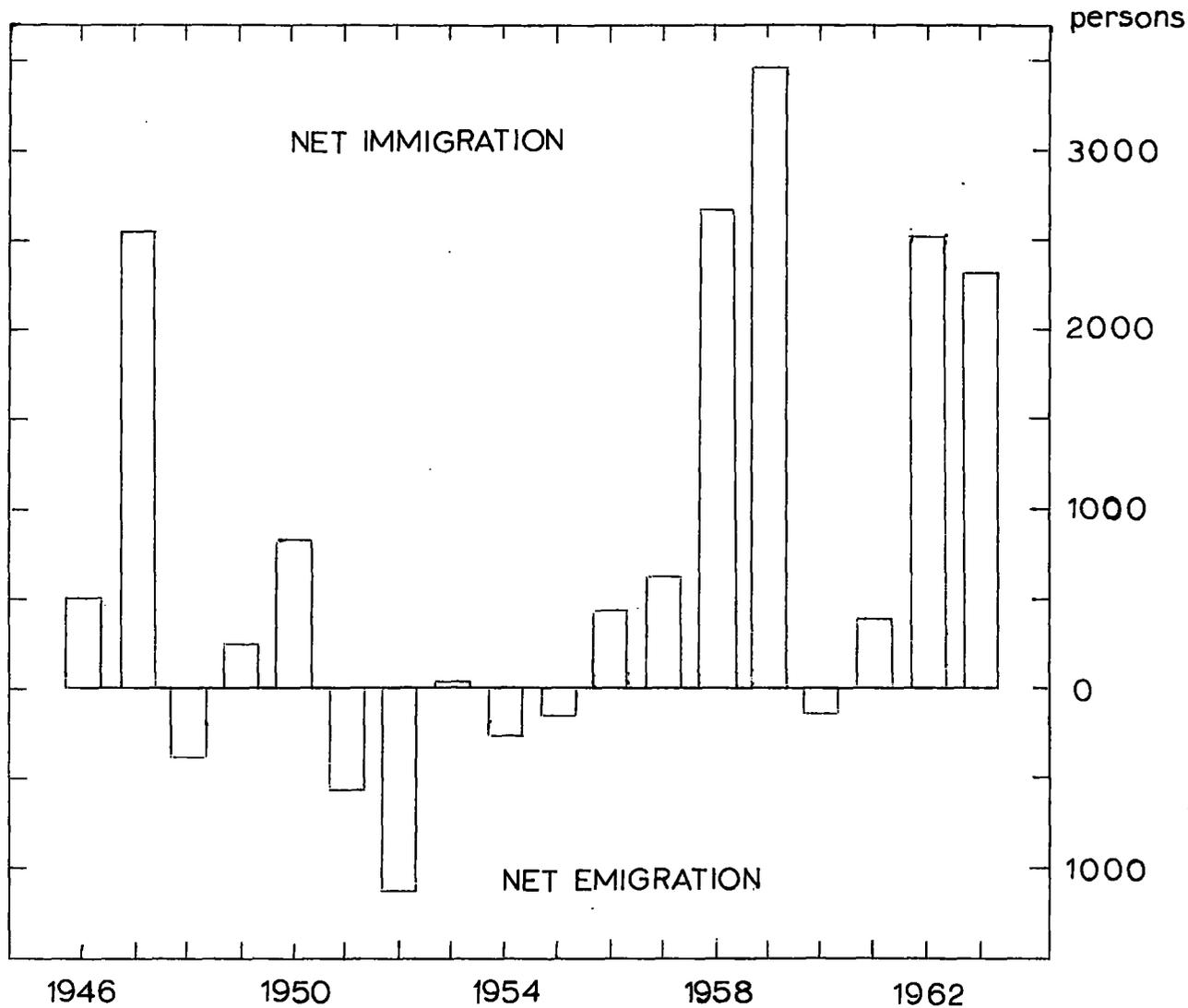
inferior as a group; nor were minorities in any way confined to a particular section of a given settlement. In fact, in most communities, only elections brought any tension to the major ethnic strains.

Movement: Apart from simply creating certain settlement patterns, urbanisation causes an ever-present movement of people from one urban area to another, as well as from rural to urban centres. According to table 2.5, between 1946 and 1960, 25.5% of the total population had moved from one county to another. "Movers" varied from 37% of the population in Mayaro to 15.3% in Caroni* (see also fig. 2.5).

Definite trends had developed in the movement of the people, the prime factor governing such movement being that of job opportunities. Thus, in response to the rapid development of oil production in the early 1950's settlements around such towns as Pointe-a-Pierre, Point Fortin, Fyzabad, Penal and Palo Seco expanded rapidly. Many of the oilfields were in St. Patrick County, and movement into this county was large. In Victoria County, however, much of the movement was from the sugar estates to the oilfields within the county. Therefore, the movement seems less than it actually was. Moreover, the growth of San Fernando would have

*This means that, in 1960, 37% of the people in Mayaro County had moved into that County from elsewhere, since 1946.

Figure 2.4 - Number of Persons Immigrating or Emigrating Annually, 1946-63.
(net figures calculated)



Source: Central Statistical Office: Annual Statistical Digest, 1964. p. 17.

Table 2.5

NON-INSTITUTIONAL POPULATION BY SEX, MIGRATION STATUS AND PLACE OF BIRTH

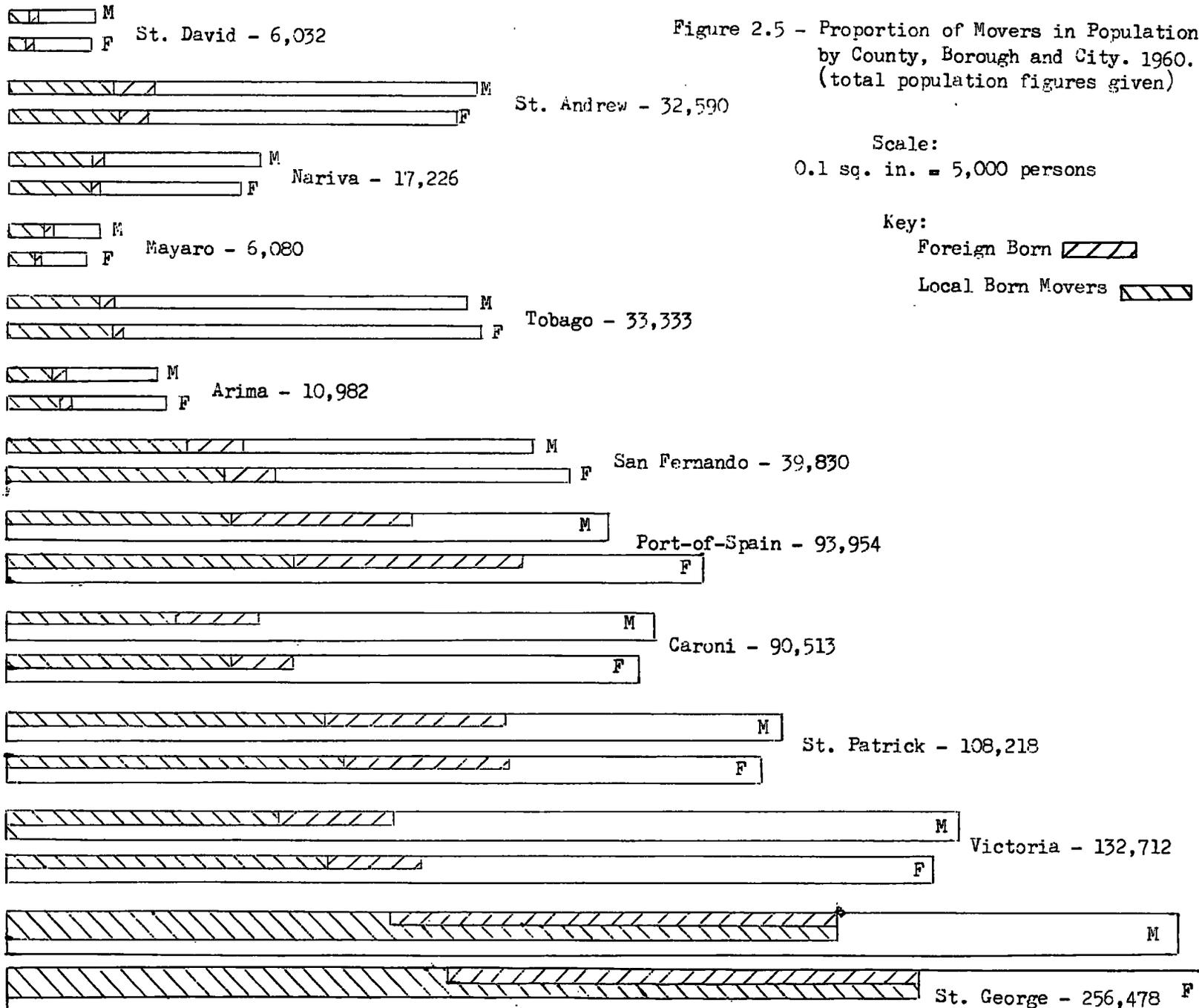
Place of Birth Migration Status	Administrative Areas												
	Trinidad and Tobago	Port of Spain	San Fernando	Arma	St. George	Caroni	Nariva	Mayaro	St. Andrew	St. David	Vic-toria	St. Patrick	Tobago
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Male													
Total	406,516	42,477	18,630	5,295	124,195	45,774	8,958	3,268	16,567	3,149	67,130	54,836	16,237
Foreign born	40,986	6,355	1,928	417	15,851	2,995	470	342	1,487	325	3,970	6,335	511
Local born													
Movers ²	97,775	7,921	6,342	1,594	43,061	5,998	2,977	1,291	3,712	700	9,622	11,298	3,259
Non-Movers ²	267,755	28,201	10,360	3,284	65,283	36,781	511	1,635	11,368	2,124	53,538	37,203	12,467
Trinidad and Tobago	365,530	36,122	16,702	4,878	108,344	42,779	8,488	2,926	15,080	2,824	63,160	48,501	15,726
West Indies	28,265	3,738	1,019	236	11,714	1,808	335	267	1,298	269	2,247	4,989	345
Other British Caribbean	1,514	427	94	14	628	84	2	6	13	2	122	93	29
Rest of World	11,207	2,190	815	167	3,509	1,103	133	69	170	54	1,601	1,253	137
Female													
Total	412,883	40,119	19,957	5,646	127,917	44,739	8,268	2,812	15,938	2,883	65,535	53,341	16,728
Foreign born	40,565	8,104	1,803	437	16,655	2,248	305	210	1,006	203	3,314	5,871	409
Local born													
Movers ²	110,817	10,123	7,667	1,858	47,829	7,879	2,968	958	3,973	668	11,363	11,871	3,660
Non-Movers ²	261,501	30,892	10,437	3,351	63,433	34,612	4,995	1,644	10,959	2,012	50,858	35,599	12,659
Trinidad and Tobago	372,301	41,015	18,137	5,209	111,262	42,491	7,963	2,602	14,932	2,680	62,221	47,470	16,319
West Indies	29,733	5,517	1,182	315	12,667	1,501	216	164	865	169	2,074	4,782	281
Other British Caribbean	1,531	587	88	8	694	65	6	4	7	2	74	70	26
Rest of World	9,218	2,000	550	114	3,294	682	83	42	134	32	1,166	1,019	102

1. Inmates of institutions are not included in the above figures.

2. Movers and Non-Movers relate to the movement of population within Trinidad and Tobago, i.e. a measurement of Internal Migration.

Source: Trinidad and Tobago Central Statistical Office: Annual Statistical Digest, 1964.
Port-of-Spain, 1964 p. 12.

Figure 2.5 - Proportion of Movers in Population
by County, Borough and City. 1960.
(total population figures given)



Source: Central Statistical Office: Annual Statistical Digest, 1962, p. 12.

drawn from the County's population during that period.

Port-of-Spain's population remained virtually stationary between 1946 and 1960, but its suburbs were expanded enormously. In fact, 1960 saw the emerging figure of a conurbation which, by 1965, had stretched from the city west to Carenage and east to Arima, largely on the strength of immigration and internal movement.

The trend of urbanisation in Trinidad has been modified by increased immigration since about 1956 (see Chapter VII). Whereas there was a general tendency among the local people to move

Table 2.6

Movement from Tobago to Trinidad

<u>Years</u>	<u>Moved from Tobago</u>	<u>Tobago's population</u>
1891	3,307	16,942
1901	5,324	17,241
1911	5,943	18,865
1921	6,094	20,942
1931	6,922	23,035
1946	11,043	24,520

Source: Niddrie, David L. : Land Use and Population in Tobago.
London, Geographical Publications,
1961. p. 47.

towards urban settlements and away from the countryside, there emerged a new wave of movement from the smaller islands of the Eastern Caribbean to the urban and rural settlements of Trinidad and Tobago. Thus, by the late 1950's there was a steady flow of movement in both directions, i.e., from urban to rural districts and vice versa. (Compare figs. 2.4 and 2.5.)

In Tobago, the pattern resembled that of the other small agricultural societies of the Eastern Caribbean. First, there had been the movement from the countryside towards their chief urban settlement - Scarborough, and thence to Port-of-Spain. This pattern also represents that of most developing countries where people move from the agrarian scene to small urban settlements and later to larger urban settlements (see table 2.6). Thus, even before the commencement of the West Indies Federation of 1958, the pattern of movement in the Eastern Caribbean had begun to respond to the better living prospects in Trinidad.

So far, we have surveyed the country's population from various standpoints. The settlement pattern, movement and historical background, in particular, bear most directly on the land-use pattern to be studied in the following two chapters.

FOOTNOTES TO CHAPTER II:

1. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port of Spain, 1959), p. 18.

- 2) ibid., p. 18
- 3) ibid., pp. 19-20
- 4) Lynn-Smith, T.: Fundamentals of Population Study, p. 484. See also Chapters VI and VII of this publication.
- 5) Lowenthal, David: "The West Indies Chooses a Capital", The Geographical Review, vol. 48, 1958, pp. 336-369.

CHAPTER III

THE PRE-PROGRAMME ECONOMY

Resources and Exploitation

Having briefly discussed the physical and human composition of Trinidad and Tobago, the next two chapters will survey the economy prior to the first Five-Year Development Programme, dealing first with the country's resource exploitation, followed by an appraisal of the National Accounts in 1958.

A look at the structure of the economy (see table 3.1) reveals both the combination of resources being exploited and the extent to which such exploitation contributed to rapid economic growth.

Except for the decline in the annual output of agriculture between 1958 and 1959, the growth in that sector was continuous between 1951 and 1961, but its overall growth had been slow, and table 3.2 brings this out. According to this table, the percentage of the Gross Domestic Product (GDP), at factor cost, representing the agricultural output declined from 17.3% to 12.1%. In contrast, one finds a steady and fast rate of growth in the petroleum and asphalt industry. But its dominance in the economy does not increase smoothly between 28.9% in 1951 and 32.0% in 1961. In fact, this sector declined in importance from 1951 to 1954, and only surpassed

Table 3.1

GROSS DOMESTIC PRODUCT AT FACTOR COST BY SECTOR 1951-1961
(1960 PRICES) \$mn.

	1951	1952	1953	1954	1955	1956
Agriculture including Quarrying	72.8	71.5	77.7	82.6	93.9	94.4
Petroleum and Asphalt	121.7	128.1	132.5	135.9	155.7	177.1
Sugar	10.8	10.6	11.7	13.3	14.8	12.3
Other Manufacturing	42.4	44.7	46.4	50.5	53.9	59.7
Construction	10.9	11.8	10.2	12.6	16.7	19.7
Government including Public Utilities	60.1	68.5	71.6	76.2	77.9	80.2
Other Services	101.7	118.5	121.2	128.6	155.6	157.6
Discrepancy ^b	+14.1	-6.0	-17.8	-29.7	-33.9	+16.1
Total	434.5	447.7	453.5	470.0	534.6	617.1

	1957	1958	1959	1960	1961	Average Annual Growth Rate
Agriculture including Quarrying	98.9	103.0	100.1	108.4	112.9	4.2
Petroleum and Asphalt	201.9	227.7	252.6	263.4	297.6	9.7
Sugar	12.9	14.4	13.9	16.8	18.5	5.7
Other Manufacturing	69.3	78.6	86.3	91.4	99.0	9.4
Construction	22.9	34.6	36.0	40.6	45.2	16.6
Government including Public Utilities	81.1	88.7	95.1	104.6	112.5	6.8
Other Services	180.1	196.8	219.0	231.4	244.6	3.9
Discrepancy ^b	+21.0	-21.7	-27.6	-	+6.9	-
Total	688.1	722.1	777.4	856.6	937.2	8.5

Table 3.2

PERCENTAGE CONTRIBUTION TO REAL GROSS DOMESTIC PRODUCT AT FACTOR COST

	1951	1952	1953	1954	1955	1956
All Sectors	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture	17.3	15.8	16.5	16.8	16.5	15.7
Oil and Asphalt	28.9	28.2	28.1	27.2	27.4	29.5
Sugar	2.6	2.3	2.5	2.7	2.6	2.0
Other Manufacturing	10.1	10.0	9.8	10.1	9.5	9.9
Construction	2.6	2.6	2.2	2.8	2.9	3.3
General Government (including Public Utilities)	14.3	15.1	15.2	15.2	13.7	13.3
All Other	24.2	26.1	25.7	25.7	27.4	26.2

	1957	1958	1959	1960	1961
All Sectors	100.0	100.0	100.0	100.0	100.0
Agriculture	14.8	13.8	12.4	12.7	12.1
Oil and Asphalt	30.3	30.6	31.4	30.7	32.0
Sugar	1.9	1.9	1.7	2.0	2.0
Other Manufacturing	10.4	10.6	10.7	10.7	10.6
Construction	3.4	4.7	4.7	4.7	4.9
General Government (including Public Utilities)	12.2	11.9	11.8	12.2	12.1
All Other	27.0	26.5	27.2	27.0	26.3

^aIn deriving average annual rate of growth, 1960 and 1961 were averaged to obtain the terminal point.

Source: Rampersad, Frank: Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-61. Mona, Institute of Social and Economic Research, 1962. p. 12.

Source: as that of table 3.1, p. 16.

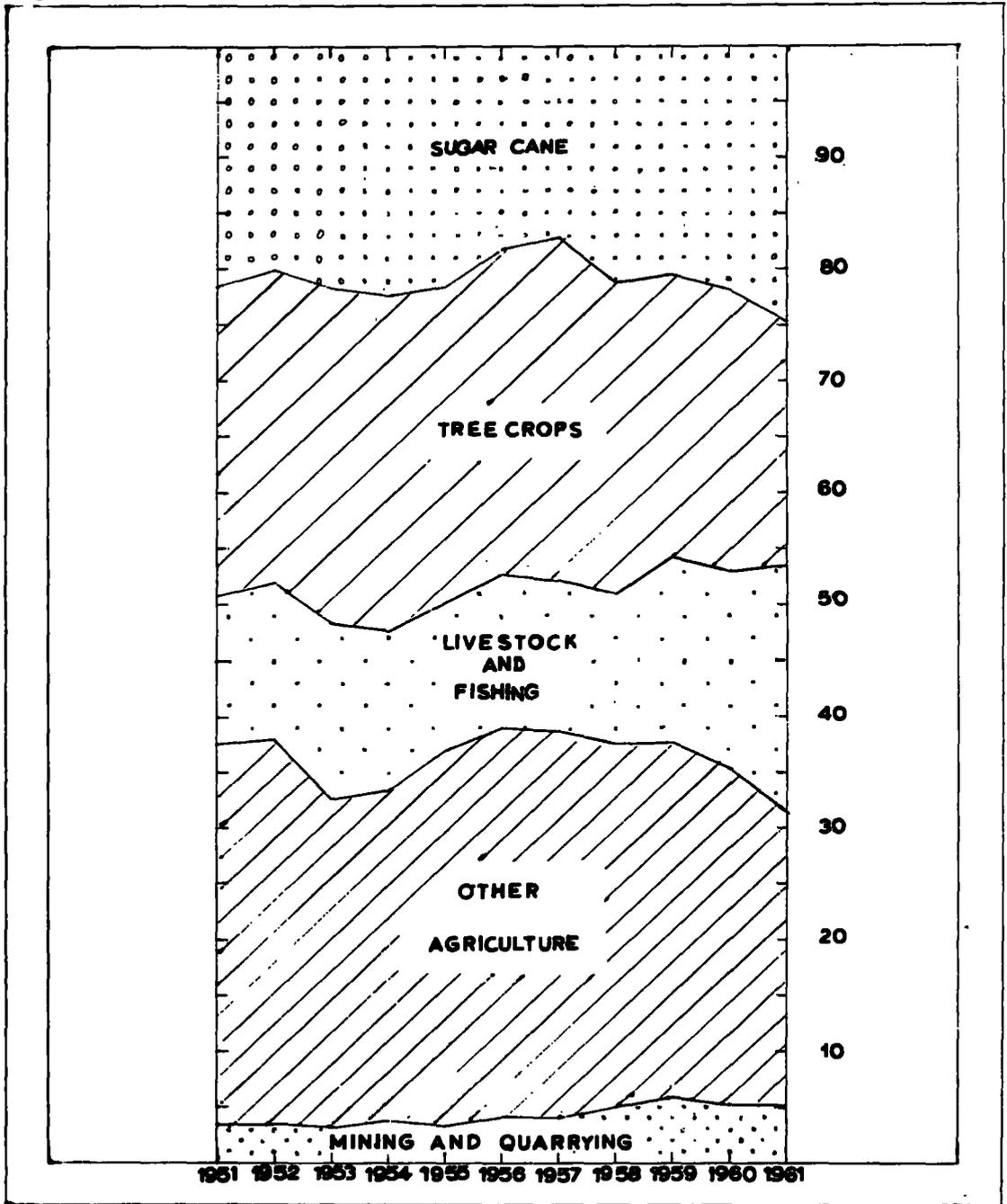
28.9% in 1956.

The sugar sector is considered as separate from agriculture because it refers to a manufacturing industry. Although the average annual growth was 5.7%, there were isolated years of decline, unlike the situation in "other manufacture" whose growth was continuous. During the decade, sugar relatively declined in importance and the other manufacturing industries increased their share in the economy, so that both groups together had almost the same cumulative importance in 1961 as in 1951 (see table 3.2). In somewhat similar terms, the asphalt industry has had a depressant effect on the petroleum and asphalt sector. On the contrary, the inclusion of quarrying in the primary sector (which also includes agriculture - see fig. 3.1) is a stimulant to the latter, as it contributed between 3% and 5% of the value of the primary sector. The output of quarrying trebled between 1950 and 1958*, and sales prices increased faster than production costs (see discussion later in chapter).

The government sector expanded steadily in absolute terms, but as a percentage of the GDP, it increased until 1953, declined from 1954 to 1959, remaining about 12% from 1957 to 1961. The

*The annual production in thousands of tons was as follows: 568.1--1950; 643.6--1951; 624.2--1952; 632.4--1953; 876.2--1954; 943.4--1955; 1,176.2--1956; 1,240--1957; 1,554.9--1958. (From the Economic Survey of Trinidad and Tobago, 1953-58, p. 40).

Figure 3.1 - Percentage Contributions of Components of Primary Sector (1951-61)



Source: Rampersad (1962), p. 21.

construction industry was a small part of the economy, but had almost doubled its share. Except for 1953, its absolute value improved annually, and the rate of expansion here was faster than that of any other sector in the economy (16.6% annually). The rest of the economy had grown both in relative and absolute terms. This "other" sector was made up primarily of services for which a comment is included later in this chapter. We should now treat the various sectors more fully (see fig. 3.2).

GOODS

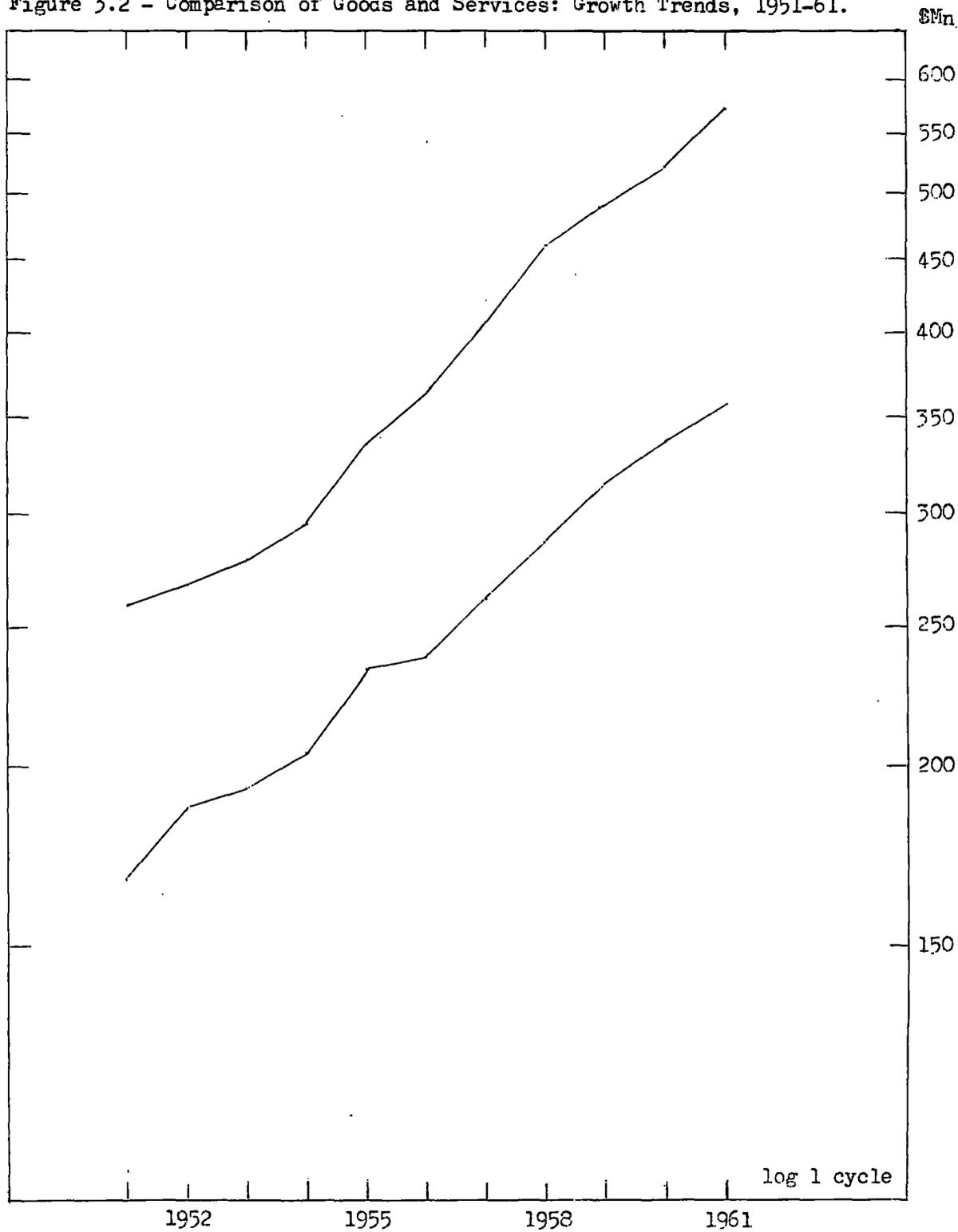
Primary Sector

Agriculture: About 45% of the land in Trinidad and Tobago was forested in 1958. A mere 29% (373,000 acres) was being "adequately used"¹ for agriculture. Semi-derelict land and land in shifting cultivation covered almost 100,000 acres - 7.8%, while swamp lands occupied 26,300 acres - 2.1%. Throughout the countryside abandoned estates and plantations could be seen (chiefly cocoa). The Government had persuaded the oil companies to maintain forests on their unused lands, and, in addition, some companies had replanted forests after drilling.

In 1958, agricultural lands (excluding forestry)* included

*Elsewhere, agricultural statistics include forestry, fisheries, and hunting, and will be referred to as the "primary sector".

Figure 3.2 - Comparison of Goods and Services: Growth Trends, 1951-61.



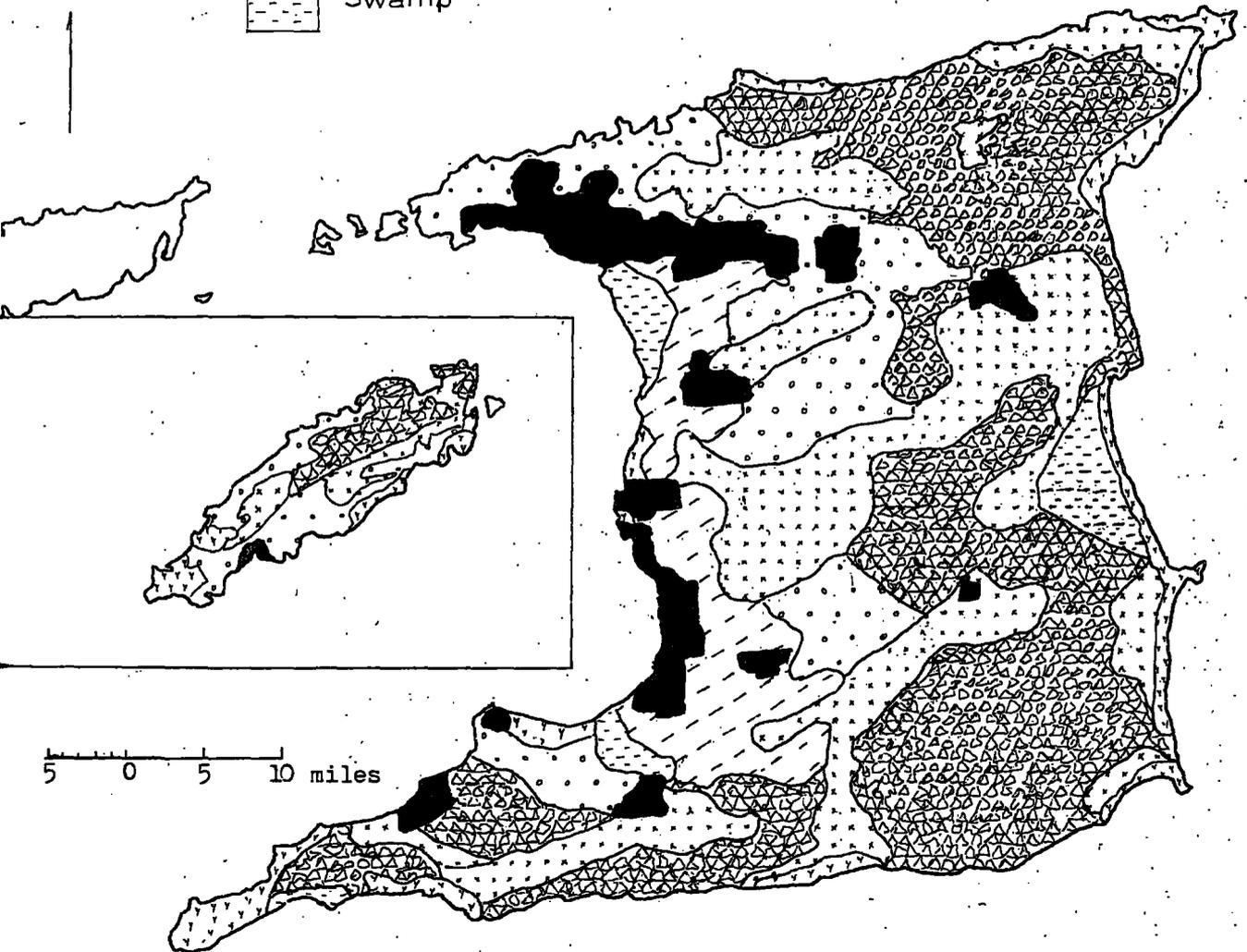
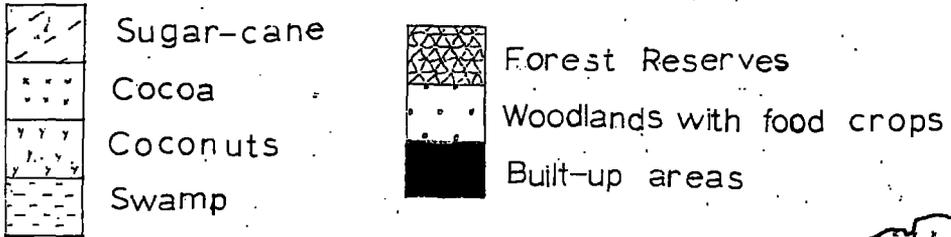
Source: Rampersad (1962), p. 17.

122,400 acres in cocoa (about $\frac{1}{3}$), 78,000 acres in sugarcane, 42,000 under coconuts, 13,000 under citrus fruit and 7,000 under coffee. Map 3.1 represents the pattern of land use in 1950, a pattern that had shown little change by 1958.

For reasons to be discussed later (see Chapter VII), the agricultural sector has not realised as much of its potential as have the other sectors. In 1958 almost 26% of the country's labour force was employed in the primary sector, producing less than 15% of the GDP (1960 prices). There was a great deal of underemployment and the general exodus from rural to urban settlements was not occurring at a sufficiently rapid rate to bring about the necessary rise in productivity of this sector (see discussion on prices obtained by farmers in Appendix II). For instance, in the sugar industry, labour costs had become very high, with the result that unless the industry had become automated, it would not be able to continue competing on the world market, without the continuation of the currently generous commonwealth protection.

In pre-war years, the economy was mainly agricultural and two of its three leading commercial crops, cocoa and coconuts, provided an inelastic supply. First, the 1920's saw the beginning of what became a drastic structural change in the primary sector itself. Cocoa, then the territory's chief source of revenue, had its market price increased from \$13 a hundredweight in 1911 to \$24

LEGEND
LAND USE



Map 3.1: Land Use in Trinidad and Tobago.
Source: MacPherson, John (1967).

in 1920, only to fall again suddenly in the following year to \$10.² During this period, the market price for coconuts increased fairly steadily, while sugar prices remained quite stable.³ As cocoa prices declined, farmers in the marginal areas began the expensive process of replacing cocoa with coconuts or sugar wherever appropriate (see discussion on crop conditions in Chapter I).

The big blow came in the 1930's when the cocoa crop was struck by the witchbroom disease. Many farmers were ruined, and much land was deserted. Following this, the coconut industry was hit by a red-ring disease in the 1940's. This resulted in widespread unemployment and indirect urbanisation which was somewhat ameliorated by the Second World War, when military activity eased the labour problem. Thus, the labour force gainfully employed in agriculture declined in absolute terms from 60,000 in 1931 to 43,000 males by the end of the war, and female workers from 20,000 to less than 11,000.⁴

Peacetime saw the return of a portion of the labour force to the land, but this portion was not very great. With the expansion of industry in the fifties and the resulting new "structural change in the economy" referred to by Frank Rampersad,* the percen-

*Throughout his book - Growth and Structural Change in the Economy of Trinidad and Tobago (1951-61) - he refers to the transportation that occurred in the economy due to the increased importance of manufacturing and service industries and the decline of agriculture.

tage of the labour force in agriculture again decreased, the male labour force further declining in absolute terms from 47,000 to 44,000. The share of agricultural production in the Gross Domestic Product fell from 18.3% in 1953 to 14.6 by 1957,⁵ despite a respectable increase in real terms from \$69.3Mn to \$90.7Mn (\$BWI).

Not only did agriculture continue to decline in importance in the fifties, but in post-war years there has been a radical shift in emphasis within the agricultural sector. We should survey the trends of crops and livestock within this sector during the seven years prior to the draft of the Development Programme.

First of all, among the broader categories of the primary sector (see fig. 3.1), there were varying trends in their relative importance between 1951 and 1957. The growth in sugar production was slower than that of the sector as a whole, while "tree crops" and "quarrying" registered faster growth rates in product value. Of the other two categories, "livestock and fishing" rose to 15.6% in 1953, but returned to the identical 1951 figure of 13.2% in 1957, while "other agriculture" fell to its lowest figure in 1953, rising again to just above the 1951 figure in 1957.

Two components warrant closer attention: "Tree crops" and "other agriculture". Both constitute the two largest shares in agricultural production and both consist of many different crops. Tree crops, although of less direct importance for local consumption,

are considerably more important for export than "other agriculture". The products of the former are cocoa, coffee, bananas, oranges, grapefruit and copra. The value of production of these crops will be discussed in Chapter IV under "The Importance of Trade". Table 3.3 shows the trends in the volume of production between 1951 and 1957 (see also Appendix II).

Table 3.3

	<u>Export of Agricultural Commodities</u>					'000 lb.
	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	
Cocoa	21,720	17,641	16,459	21,837	15,946	
Coffee	2,374	3,973	3,193	3,297	3,999	
Copra	1,637	1,904	8,480	2,423	840	
Oranges	4,820	3,366	4,873	4,178	3,061	
Grapefruit	14,006	7,665	11,754	9,254	10,117	
Bananas	2,608	5,539	2,844	8,988	9,985	

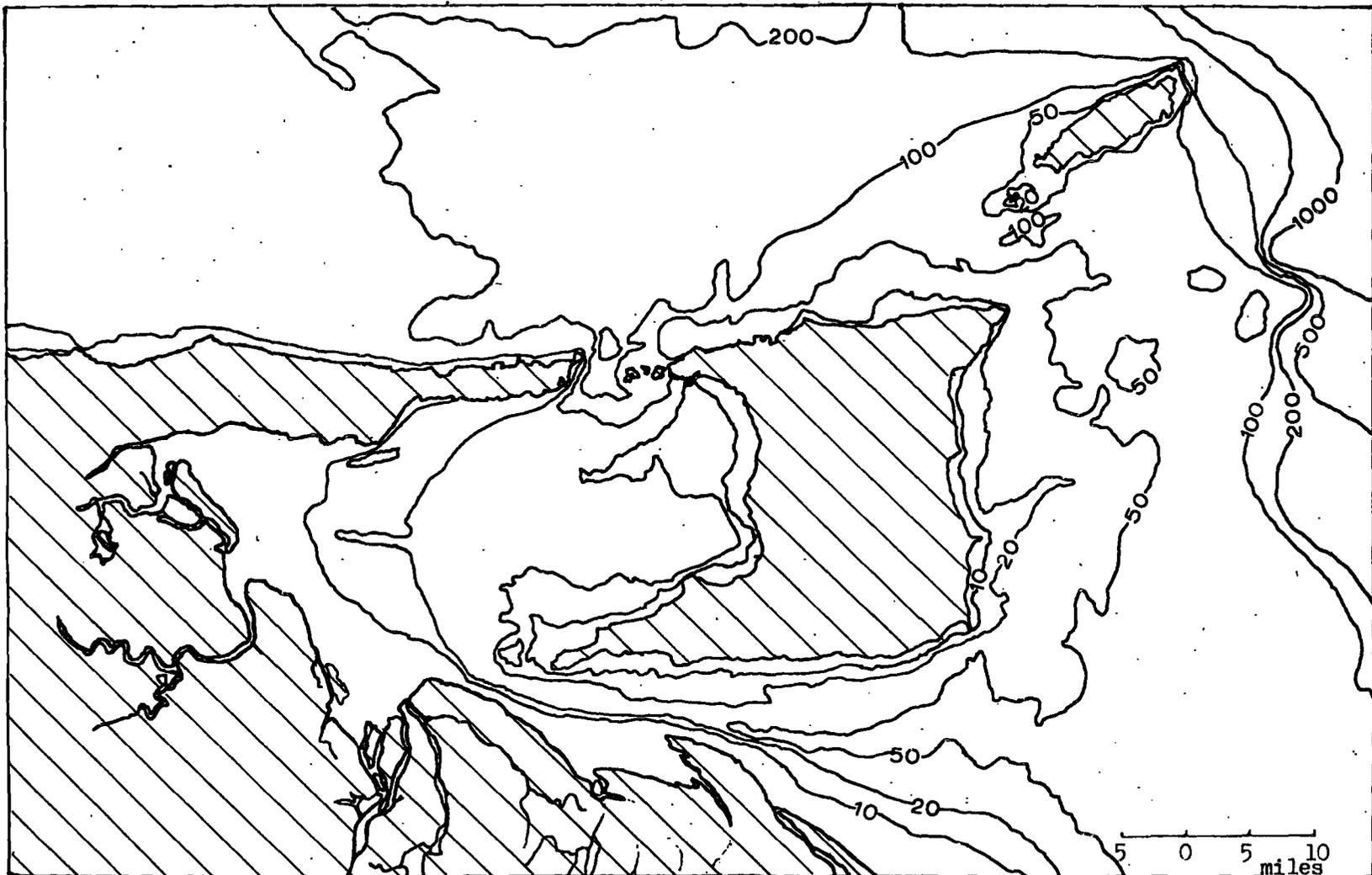
Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port-of-Spain (Government Printery), 1958, p. 27.

Root crops, vegetables, local food crops and other agricultural products grown chiefly for domestic consumption constitute the category "other agriculture". The growth rate of production here was slower than average for the agricultural sector. Local

production of meat increased rapidly, but local consumption between 1954 and 1958 doubled, increasing the quantity imported. Poultry farming in Trinidad and Tobago during this period had increased in volume faster than other livestock and appeared to be a promising boost to the agricultural sector on the eve of the Development Programme.

In summary, it should be noted that growth in the agricultural sector in the 1950's was moderate, although it tended to be overshadowed by remarkable expansion in production in the petroleum industry, the construction sector, and the service sector. On the strength of these three sectors especially, the economy as a whole experienced average annual increases of over 13.5% between 1954 and 1957.

Fisheries: The fishing industry in Trinidad and Tobago in 1957 was markedly underdeveloped. The actual production was a small fraction of its potential. The country is in an exceptionally good location, since the nearby Orinoco Delta is the breeding ground for the Carite or Spanish Mackerel which swim north after hatching (see map 3.2). The King fish spawn in the Sargasso Sea area before migrating south to the banks off the east coast of Trinidad and Tobago. A third species, the Blue fish, migrates from the east coast of the U.S.A., off New Jersey, Delaware and North Carolina, to Trinidad's east



Map 3.2: Ocean Depths off Trinidad and Tobago (in fathoms)
Source: United States Army Survey (1942)

coast to winter. These species travelled in large schools, virtually unmolested by the island's fishermen who had no vessels sufficiently large to go out to intercept them. The communication between the Fisheries Department and the local fishermen was almost negligible at the time, but plans were being formulated to organize fishing co-operatives to enable local fishermen to afford larger, power-driven vessels and adequate fishing gear.

Data and statistics on Trinidad and Tobago fisheries prior to 1957 were scarce, but there was some information that gave a vague idea of the level at which the Development Programme started its fisheries projects. The Fisheries Department, on the basis of statistics on local catches handled through Port-of-Spain (5,010,276 lb.) and San Fernando (1,650,478 lb.), estimated the annual catch of Trinidad and Tobago to be less than 10,000,000 lb. Over 9,200,000 lb. of fish and fish products were imported, of which some 6,400,000 lb. was dried. The dried fish "probably represented about 20,000,000 lb. of fresh fish."⁶ Together with the local catch, the fish consumption level is comparable to that of Britain. However, since imports had been so high, the Programme was planning to increase local catch.

Forestry: The forests of both Trinidad and Tobago owe their luxuriance largely to the absence of regular hurricanes and gale-force winds. The latest hurricane disaster was in 1963 in Tobago, when

widespread damage resulted. The forest reserves in Tobago, prior to the Development Programme, were virtually unexploited. In Trinidad, however, much of the Crown Land forests have been used for commercial lumbering.

Most of Trinidad's reserves are evergreen seasonal. In the Northern Range, however, montane forests are predominant. Moreover, the Forestry Department has been developing teak plantations on a large scale, chiefly in the Central Range, around Tabaquite (see map 3.1).

In their natural state, both evergreen seasonal and montane types consist of a wide variety of species. Such a phenomenon makes collecting timber quite arduous, since only about 50-60 of the 400 species present are of commercial importance. The Forestry Department has done extensive research into the forestry situation since 1901, and, having persuaded wood-cutting enterprises to replant valuable species after clearing, some areas have up to 80% commercial species.

Evergreen seasonal forests are fairly tall, with a discontinuous emergence of trees reaching 100 ft., above a quite continuous canopy of 40-90 ft. Semi-evergreens are not as tall, while the deciduous seasonals are still shorter.

Montane forests are subject to a greater degree of destruction than the seasonal types, due to the exposure of the former

to the prevailing Trade Winds. The canopy of these forests is noticeably lower at 60 ft. The lower montane type is a virtual transition between the evergreen seasonal and the montane, having a considerably higher canopy than the latter of up to 100 ft.

Table 3.4

Trees per 100 acres by Major Forest Types

<u>Girth</u>	<u>Evergreen</u>	<u>Semi- Evergreen</u>	<u>Deciduous</u>	<u>Montane</u>	<u>Lower Montane</u>
1-6 ft.	15,000	115-175	15,000	11,000	16,000
6-10 ft.	500	120-1000	50	100	800
over 10 ft.	60	20-400	-	-	80

Source: Marshall, R. C.: The Physiography and Vegetation of Trinidad and Tobago. Oxford, 1934.

The variations in the densities of trees in general, and economic species in particular, are brought out by table 3.4

In 1901, the Government, acting on the advice from the Forestry Department, acquired as Crown Land large expanses of waste land and abandoned estates. The purpose was to check soil erosion and provide a valuable source of timber. In 1913, teak plants were imported from Burma and India to be grown as forest plantations. At first, planting was slow, but by 1928 the rate had increased to

115 acres annually, to over 180 acres annually in 1940, and 750 acres annually by 1955. By 1959, some 13,000 acres had been planted with teak altogether. "Teak prefers a slightly acid soil,"⁷ such as a well drained calcareous clay or sandy loam formation or silts along stream beds. Most plantations are found in Montserrat and Charuma wards around Tabaquite.

In the Arena Reserves, a tropical shelterwood has evolved from early plantations of a local species, while in 1950, a tropical pine was introduced to cut Trinidad's import expenditure on soft woods which valued \$4,750,000 in 1961. This scheme was then in its pioneer stage, with only a few hundred acres under cultivation.

MANUFACTURE AND INDUSTRY

One of the more indelible effects of the Second World War on the country is that the presence of U.S. bases and the correspondingly large volume of mobilisation by Britain and employment recruitment by the U.S. initiated a new wave of urbanisation (briefly referred to in section on agriculture). This urbanisation was a prelude to later industrialisation. In the years following the war, there was an abundant labour force in urban areas, providing a valuable basis for manufacturing industries, as the industrial sector grew rapidly.

The 1950's had seen the fastest growth rate of the Gross Domestic Product in the country's recent economic history, averaging

over 13% between 1954 and 1957. The increase in petroleum production is largely responsible for this boost in the economy. The oil industry accounted for the largest share of the GDP, and "prior to 1955 there was very little manufacturing industry other than oil and sugar."⁸ After 1955, however, the growth of other manufacturing industries was faster than that of the economy as a whole, as many new industries were established.

Petroleum Industry: The production of oil and asphalt grew at a faster rate than the rest of the economy. This growth had very significant effects on many walks of life in the community of Trinidad and Tobago. Operating as "the principal prime mover in the economy,"⁹ the oil industry accounted for the majority of external trade (in terms of value) and contributed most to financing government expenditure.*

Not only did the financing of government expenditure result in the substantial expansion of public services such as education, public health, roads and water, indirectly it increased employment in the government sector as well. The labour force on the oilfields also increased as towns in the south of Trinidad associated with the oilfields witnessed rapid population growth. Wages in the

*N.B. Asphalt production actually declined in that period and made no significant contribution to either the GDP or to Government Revenue.

oil industry were exceedingly high by territorial standards, and the competition for manpower forced up labour costs to critical heights in the adjacent sugar companies.

Production costs were also extremely high in the oil industry, although wages were just a small portion of these costs. The high cost of drilling was the main cause. Unlike most oil-producing areas, the oil in Trinidad occurs in isolated pools at great depths. The high cost of exploration under these conditions had discouraged the expansion of the industry prior to the 1950's, and as it became more feasible to import crude oil to keep the island's refineries employed, new contracts were obtained chiefly from Venezuela and the Middle East, and the refinery capacity expanded, especially at Pointe-a-Pierre.

Crude oil production statistics show an increase from 23.6 million barrels in 1954 to 37.4 million in 1958. Four factors are largely responsible for this rapid growth: (1) the increase in refinery capacity which made possible a larger throughput, (2) increased activity in onshore drilling, (3) the success of marine drilling which provided the boost in morale necessary to encourage further drilling, and most important (4) the growth in capital expenditure that made all this possible. The purchase of Trinidad's largest oil company by the Texas Company in 1956 (see Chapter IV) further encouraged a spirit of enterprise which undoubtedly had its

effect on the industry as a whole. This expansion in local production was actually faster than the growth of imports over the same period, as the percentage of imported crude oil being refined declined slightly from 46% to 42%.

Apart from crude oil production, Trinidad had been extracting an increasingly important volume of natural gas. The volume more than doubled between 1954 and 1958 (38,400 million cu. ft. to 79,200 million cu. ft.). However, the proportion put to use as fuel fell from 47% of the annual extract to 29% over the same period. The reason for this is that the method used for extraction of crude oil requires that some of the gas be re-injected to increase the pressure of the deposit beneath the surface, thus lengthening the flowing life of the wells.

The petroleum industry, other manufacturing industries, and government services were expanding quickly, especially from 1954 to 1957. The general atmosphere in the British Caribbean islands was charged with proposals and preparations for federation. Trinidad's higher standard of living was no secret in the rest of the Eastern Caribbean, and already an increase could be seen in the volume of immigrants, as the "Small-Islanders"* came in search of better job

*A term used in Trinidad to refer to people in the smaller islands of the Lesser Antilles.

opportunities. The increase was not sudden, but its influence was apparent in urban areas where they settled to find jobs. Only a very small minority settled in rural areas at first, (see Chapter II), but this number increased rapidly.

In the following chapter we will consider in greater detail the behaviour of the economy as a whole. For the present, we should examine trends in the productivity of the various industries.

Asphalt: The asphalt industry is generally associated with oil under "mining", or simply the "petroleum and asphalt sector".

Table 3.5

	<u>Production of Asphalt - (1954-58)</u>					(tons)
	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	
Total asphalt extracted:	142,101	136,729	141,127	135,939	133,042	
of which for export:	95,368	84,363	85,734	74,892	76,509	
for local use:	46,733	52,366	55,383	61,047	56,533	
Total export of dried asphalt:	51,035	49,740	45,783	41,258	44,436	
Total export of asphalt cement:	22,587	13,107	13,548	12,706	11,146	

Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port-of-Spain, Government Printery, 1958, p. 36.

The production of asphalt, however, has been declining (see table 3.5). From the table above, one sees a tendency to diminishing output and a definite decline in export. Production, as above, was depressed by a declining world market and a fairly stable local demand.

Quarrying: Quarrying witnessed substantial expansion in both production volume and value in the 1950's, as industrial development stepped up the rate of building activities in both the residential and business areas.

The number of productive quarries was 173 in 1950 and 249

Table 3.6

<u>Items</u>	<u>Quarry Products</u>				(tons)
	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>
Limestone	483,004	488,707	689,731	671,054	830,051
Porcellanite	63,070	79,262	73,364	80,662	96,441
Sand and gravel	215,216	256,305	283,295	342,534	417,959
Pitch sand	26,552	29,169	33,657	33,025	87,660
Clay	88,406	90,000	95,736	110,400	120,030
Gypsum	-	-	432	2,336	2,777
TOTAL:	876,248	943,443	1,176,215	1,240,011	1,554,918

Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port of Spain (Government Printery), 1958, p. 40.

in 1958, with about 5% of those in production becoming exhausted each year. The items of production are listed in table 3.6 above:

The limestone output averaged over 50% of the total volume during the period 1950-58. Sand and gravel constituted almost 28% and clay 10%. Production costs increased by 60-70% and the selling price by about 100% during the same period. Although there is an abundance of quarry material, supply was not keeping pace with demand. A shortage of transport vehicles throughout slowed down distribution, causing a bottleneck in the industry. These conditions resulted in sharp increases in prices.

Construction: The improving standard of living and rapid urbanisation were being accompanied by the building of new houses as well as the renovation of older dwellings. There was physical expansion in the various industries and improvement in the road system (building bridges, etc.). Accordingly, the construction sector grew rapidly. Between 1951 and 1957 its share in the GDP went from 2.6% to 3.4%, and then jumped to 4.7% in 1958, as the Five-Year Development Programme was commenced.

Manufacturing Industries (Excluding Oil): In 1950, manufacturing industries were recognised as crucial to the future development of the economy of Trinidad and Tobago, when the Government drew up the Aid to Pioneer Industries Ordinance. Aimed at encouraging more

Table 3.7

Production of the Most Important Commodities, 1954—1958

Commodity	Unit	1954	1955	1956	1957	1958
Sugar	000 tons	173	193	160	168	183
Rum (Distilled)	000 proof gal.	1,835	1,166	1,365	1,365	1,901
Molasses	000 gal.	7,755	8,483	7,413	7,085	10,689
Gin*	000 proof gal.	—	22	4	5	2
Beer*	000 liq. gal.	596	575	606	686	1,054
Stout*	000 liq. gal.	108	131	110	135	142
Bay Rum (incl. perfumed spirits)	000 proof gal.	23	21	30	35	32
Matches	000 gross small boxes	276	277	286	301	376
Edible Oil	000 gal.	1,667	1,873	1,899	2,011	1,947
Lard substitute	000 lb.	1,643	1,836	1,807	2,235	2,646
Raw Oil	000 gal.	2,451	2,604	2,578	2,801	2,672
Margarine	000 lb.	1,945	2,474	2,605	2,625	3,012
Laundry Soap	000 lb.	10,714	9,246	9,254	8,716	8,617
Toilet Soap	000 lb.	26	8	26	36	40
Butter substitute	000 lb.	354	284	254	327	287
Cigarettes	000 lb.	1,503	1,627	1,734	1,728	1,799
Other manufactured tobacco	000 lb.	35	37	36	32	25
Textiles(1)*	000 sq.yd.	1,223	1,504	1,660	3,351	2,327
Bitters(1)	000 gal.	62	55	82	73	79
Grapefruit & Orange juices ..	000 liq. gal.	1,112	1,675	1,574	1,659	3,259
Clothing (Shirts and pyjamas) not knitted(1)	000 doz.	12	10	7	10	15
Paints(1)*	000 liq. gal.	40	47	60	62	68
Cement*	000 tons	n.a.	121	137	131	147
Medical and Pharmaceutical Products(1)*	\$000 (value only)	253	270	266	370	261
Electricity generated ..	000 k.h.	259,852	278,903	310,563	329,736	378,261

(1) Only figures of exports are available.

* Denotes pioneer industry.

Source: Trinidad and Tobago Government:
Economic Survey of Trinidad and Tobago (1953-58).
 Port-of-Spain (Government Printery), 1958. p. 18.

local production of foodstuffs and other items, the government hoped to decrease the volume of imported consumer goods relative to capital goods. Such an achievement would provide more employment and diversify the export trade. At that time, petroleum, sugar and cocoa accounted for 92% of the exports.

The concessions in the Ordinance included exemption from import duties on capital equipment and raw material imported for processing, as well as tax-free profits for the first ten years. By 1958 over 200 applications had been made for pioneer status, of which 175 had been granted, and 30 were still pending approval at the end of the year. The c.i.f. value of goods imported duty-free increased from \$0.9Mn in 1952 to \$4.1Mn in 1958, while the gross output within these industries went from \$5.2Mn to \$23.1Mn between 1953 and 1958.

We should examine some of the important manufacturing industries to better understand the pattern of development in progress within the sector. Table 3.7 includes a list of the commodities manufactured within the sector.

Sugar: Since the late 1930's, this industry has been most important among the manufacturing industries. From 1946 to 1955, there was an overall increase in sugar production from 110,000 tons to 193,000 tons (see fig. 3.3). In 1956, however, production

000
tons

Figure 3.3. - Post-War Growth of Sugar Production, 1946-60.



Source: Journal - Agricultural Society of Trinidad and Tobago (1960).

fell to 160,000 tons. The "dry season" that year was unusually wet, and the sugar cane reaped was 1.6Mn tons, compared with 1.8Mn for the previous year. Wet conditions hinder the physical process of harvesting, but of further significance is the relative sugar content of the cane harvested. Because of the excessive rain, the sugar content decreased from one tone of sugar in 9.5 tons of cane, to one in 10.2 tons of cane. After 1954, there was considerable modernisation on the sugar estates, hence the sudden increase from 153,000 tons in 1953 to 173,000 tons in 1954.

Rum: The output in this sector was only 4% higher in 1958 than what it was in 1954. The export market had been very small, (also local consumption had not increased significantly) with the result that the accumulated stock had grown to almost 4.3Mn proof gallons by 1958. Moreover, due to conspicuous consumption, imported rum made up 22% of total local consumption. (Actual consumption in 1958 was 768,000 proof gallons.)

Beer and Stout: Two different firms had local monopolies on the production of each of these commodities in the early 1950's. They were both pioneer industries, and the output in beer grew rapidly. In 1954 they merged, and, by 1958, their annual production had increased by 80%. A small quantity was exported,

and the rest supplied 73% of the local needs.

Orange and Grapefruit Juice: The citrus growers had a co-operative cannery for processing and canning orange and grapefruit juice. The cannery's output fluctuated prior to the commencement of the Programme, but there was a general tendency toward increased production. Compared with their respective 1951 outputs, orange juice production was five times larger in 1957, and grapefruit juice four times larger in 1958.

Copra Products: The products of copra are edible oils, lard substitutes, soap, margarine and other butter substitutes. Between 1954 and 1958, the sale of edible oil increased by 17% and lard substitutes by 60%. The copra products kept pace with local demand, and, except for butter, the overall import of oils and fats was very small.

Others: Other important contributions to the manufacturing sector came from cement, textiles and cigarettes. Cement production commenced in Trinidad late in 1954, and from 1955 to 1958, production had expanded by 20%. The textile industry saw a 90% increase between 1954 and 1958, while in the same period, the cigarette output had grown by 19%. Table 3.7 gives an idea of the importance of the different commodities to the sector as a whole.

SERVICES

Comparing the goods-producing sectors with the service sectors, fig. 3.2 reveals approximately equal growth rates. The rate of growth in the latter was kept low by the slow progress in the public sector, while agriculture limited the expansion of goods production.

The service sector plays a very intricate role in the function of the economy. The sector may be divided into four categories: (1) transport and communication, (2) distribution, (3) banks and financial institutions, and (4) professional services.¹⁰ In the first group are included road, rail, air and coastal steamer transport, as well as telephone and cable communication, postage, storage and warehousing. Transport facilities are available for passengers and freight alike, but freight transport by road is not accounted for. Instead, wherever applicable, this service has been included in the accounts of the sectors utilising it.*

The distribution sector is more specialised and distinctly larger than transportation and communication.¹¹ It includes the distribution of imports (except those made directly by government

*Appendix I to Chapter II contains more detailed examination of the characteristics of transport and communication, in which networks, media and usage are considered.

and certain other private organisations, e.g. crude oil). It also includes the export of cocoa and citrus products which are handled through recognised channels, but not agricultural products for local consumption.

The third group includes banks and insurance companies. The fourth group is extremely diverse, with professional services (such as doctors and dentists), entertainment and laundry services being the main components from which the growth in output is derived.

Table 3.8, below, shows the growth of the four parts of the service sector:

Table 3.8

	<u>The Service Sector (1953-57)</u>				\$Mn
	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>
Transport and Communica- tion	19.6	20.4	24.4	26.7	28.0
Distribution	35.2	37.5	56.6	73.8	80.6
Banks & Financial Institu- tions	4.1	4.0	6.3	6.7	7.1
Professional & others	<u>20.9</u>	<u>21.5</u>	<u>25.9</u>	<u>28.0</u>	<u>29.1</u>
Total for sector	79.8	83.4	113.2	135.2	144.8
GDP at factor cost	379.6	404.2	469.0	547.3	622.8
Sector as % of GDP	21.0	20.6	24.1	24.7	23.2

Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port-of-Spain (Government Printery), 1958, p. 58.

There was upward movement in each of the four components, but the fastest growth was in "distribution", as its output more than doubled (at current prices). "Banks and financial institutions" witnessed a 73% increase, while "transport and communication", and "professional and other services" showed slower increases of 43% and 39% respectively. Prices in the sector changed only slightly, so that at constant prices the growth rate within the sector would not be greatly changed. There were signs of acceleration in the expansion of the sector after 1954. This was more noticeable in "distribution", where between 1951 and 1954 the output only increased from \$29.5Mn to \$37.5Mn¹² but then shot up to \$56.6Mn in 1955. Such a growth pattern seems to bear close correlation with the growth of the economy as a whole, which would indicate the interdependence of this sector and the rest of the economy.

Unemployment and Underemployment: People out of work, but seeking a job during the weeks of the 1957 survey were considered unemployed, making up 20,000 of the labour force of 289,000.* However, if this

*According to a government publication, "The Size and Structure of the Labour Force", No. 2 - 1956, p. 3, the survey was carried out over a five-week period. Trinidad was divided into four districts, each of which was surveyed during one of the four weeks in November. During the first week in December Tobago was surveyed.

survey had taken place in August/September, three months prior, a further 8,000 would have been registered in the labour force as unemployed. Moreover, there was a nebulous margin separating these from the underemployed. Thus, many of the latter, for example, dock workers and some construction workers, worked irregularly. Such workers, like dockers in England prior to September 1967, were relatively well-paid for their skills. This was, nevertheless, an exception to the customarily low level of wages associated with underemployment.

In 1957, 269,000 persons were employed, of whom 190,000 were male and 79,000 female. Of the total, 118,000 (43.9%) were considered underemployed, (64,000 males and 54,000 females), including "21,000 small farmers, 24,000 petty traders, odd-jobbers and other small own-account workers, 29,000 domestic workers (i.e. domestic servants, yard-boys etc.), 29,000 other paid employees working short time or at very low wage rates, 14,000 unpaid family workers and 1,000 unpaid apprentices".¹³

A large part of the service sector was considered underemployed, including housewives engaged in part-time services, such as hair-dressing, and people selling lottery tickets for a small commission. The growth of this sector had accordingly been severely inhibited by such underemployment, as was the entire economy.

FOOTNOTES TO CHAPTER III

1. Trinidad and Tobago Government: First Five-Year Development Programme (1958-62). (Port-of-Spain, Government Printery, 1958), p.9.
2. James, Preston: "A Geographic Reconnaissance of Trinidad." Economic Geography, vol. 3, 1927, pp. 100-102.
3. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958).
4. Harewood, Jack: Employment in Trinidad and Tobago, 1960. (Mona, Jamaica, Institute of Social and Economic Research, 1960) p.74.
5. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958), p.25.
6. Trinidad and Tobago Department of Fisheries: Administrative Report. (Port-of-Spain, Government Printery, 1957), p.4.
7. Trinidad and Tobago Department of Forestry: Progress Report (1955-60) (Official-unpublished).
8. Rampersad, Frank: Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-61. (Mona, Jamaica, Institute of Social and Economic Research, 1962), p.15.
9. Ibid., p.17.
10. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958), p.58.
11. Ibid., p.60.
12. Ibid., p.68.
13. Ibid., p.111.

CHAPTER IV

THE PRE-PROGRAMME ECONOMY

National Accounts

The physical and human resource bases of the economy prior to the commencement of the First Five-Year Development Programme have been outlined thus far. Comments on the exploitation of these resources have given a further insight into the related economic trends. This information provides only a partial introduction to the Programme, not accounting for the financing of it. Accordingly, this chapter discusses the country's national accounts showing the extent to which the economy generated the necessary funds for the Programme.

NATIONAL ACCOUNTS

At current prices, the Gross Domestic Product (GDP) increased from \$333.1Mn in 1951 to \$1,144.2Mn in 1964, a growth of 243.5% for the period. Similarly, the growth of the National income was from \$250.6Mn to \$824.7Mn (a 229.1% increase). Table 4.1 reproduces the national accounts as tabulated by International Monetary Fund officials in 1965. The data included here is so intricate that we shall discuss its economic implications in detail.

Expenditure on the GDP: Three components of consumption expenditure

Table 4.1

National Accounts

(In millions of Trinidad and Tobago dollars at current prices)

	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Prel. 1963	Prel. 1964
1. <u>Consumption expenditures (a+b)</u>	240.2	275.3	293.2	325.1	359.5	422.0	468.7	521.4	578.0	642.9	697.7	744.9	787.2	848.9
a. <u>Public (i+ii)</u>	35.2	44.7	49.9	56.4	60.6	67.7	66.1	77.7	81.6	87.8	109.5	122.7	135.2	155.0
i. Recurrent expenditures of the Government	(46.7)	(54.0)	(59.9)	(66.6)	(69.1)	(74.9)	(80.8)	(94.9)	(104.3)	(117.3)	(140.7)	(149.6)	(166.5)	(191.7)
ii. Other and adjustments for national accounts purpose	(-11.5)	(-9.3)	(-10.0)	(-10.2)	(-8.5)	(-7.2)	(-14.7)	(-17.2)	(-22.7)	(-29.5)	(-31.2)	(-26.9)	(-31.3)	(-36.7)
b. Private	205.0	230.6	243.3	268.7	328.9	354.3	402.6	443.7	496.4	555.1	588.2	622.2	652.0	693.9
2. <u>Gross domestic investment (a+b+c)</u>	85.8	94.5	85.9	91.7	115.5	125.5	172.5	206.2	249.3	285.9	256.3	298.2	285.5	292.6
a. <u>Fixed capital formation in the public sector (i+ii)</u>	9.1	10.9	13.6	14.6	18.9	18.8	21.6	33.2	41.8	47.1	47.6	64.3	64.5	71.6
i. Government capital expenditures	(13.2)	(9.5)	(11.9)	(16.2)	(19.5)	(21.0)	(21.3)	(32.5)	(38.0)	(38.6)	(68.2)	(52.9)	(62.8)	(63.6)
ii. Other and adjustments for national accounts purpose	(-4.1)	(1.4)	(1.7)	(-1.6)	(-0.6)	(-2.4)	(0.3)	(0.7)	(3.8)	(8.5)	(-20.6)	(1.4)	(1.7)	(8.0)
b. <u>Fixed capital formation in the private sector (i+ii+iii+iv)</u>	60.7	63.9	65.2	69.8	89.9	102.0	139.7	162.4	200.8	221.2	211.2	231.1	226.7	214.7
i. Petroleum industry	(30.6)	(30.1)	(32.2)	(35.2)	40.5)	(48.9)	(66.7)	(71.7)	(102.6)	(101.7)	(85.8)	(107.3)	(108.0)	(107.9)
ii. Sugar and rum industries	(1.5)	(1.6)	(1.7)	(1.6)	(5.3)	(5.1)	(6.4)	(7.3)	(6.8)	(4.1)	(4.6)	(4.5)	(4.0)	(3.7)
iii. Housing	(8.0)	(9.2)	(11.7)	(12.4)	(13.7)	(16.1)	(16.2)	(16.6)	(19.4)	(22.7)	(26.0)	(29.5)	(36.4)	(36.1)
iv. Other activities	(20.6)	(23.0)	(19.6)	(20.6)	(30.3)	(31.9)	(50.4)	(66.8)	(72.0)	(92.7)	(94.8)	(89.8)	(78.3)	(67.0)
c. Changes in stocks	16.0	19.7	7.1	7.3	6.7	4.7	11.2	10.6	6.7	17.6	-2.5	2.8	-5.7	6.3
3. <u>Exports of goods and services</u>	176.3	186.4	220.8	227.4	245.1	294.1	357.0	365.9	375.4	393.2	431.2	427.2	454.1	442.2
4. <u>Imports of goods and services</u>	170.6	191.9	191.9	208.2	244.5	251.7	303.0	330.0	356.5	403.7	382.4	408.6	419.8	439.5
5. <u>Gross domestic product at market prices (1+2+3-4)</u>	331.7	364.3	408.8	436.0	505.6	589.9	695.2	763.5	846.2	918.3	1,002.8	1,061.7	1,107.0	1,214.2
6. <u>Net factor income payments abroad</u>	27.4	21.8	33.1	27.9	34.8	66.7	108.6	89.2	117.6	89.0	114.3	113.6	110.1	115.1
7. <u>Gross national product at market prices (5-6)</u>	304.3	342.5	374.9	408.1	470.8	521.2	586.6	674.3	728.6	829.3	888.5	948.1	996.9	1,029.1
8. <u>Subsidies</u>	10.0	10.2	9.4	8.9	5.3	5.5	5.3	6.0	6.6	6.9	9.7	10.2	12.1	14.6
9. <u>Indirect taxes</u>	29.6	31.1	31.1	34.4	34.8	39.1	41.4	50.1	53.7	59.3	57.7	66.2	79.4	83.5
10. <u>Gross national product at factor cost (7+8-9)</u>	284.7	321.6	353.2	382.6	441.3	487.6	550.5	630.2	681.5	776.9	840.5	892.1	929.6	960.2
11. <u>Provision for the consumption of fixed capital</u>	24.1	29.3	38.5	37.3	43.8	53.8	48.6	63.3	72.4	93.1	98.5	112.7	123.4	135.5
12. <u>National income (10-11)</u>	260.6	292.3	314.7	345.3	397.5	433.8	501.9	566.9	609.1	683.8	742.0	779.4	806.2	824.7

Source: International Monetary Fund Report of Trinidad and Tobago, Part II, appendix, Table B., 1965.

are dominant - private consumption expenditure, general government consumption expenditure and gross domestic capital formation. Using constant 1951 prices, these three components constituted 92.6% of total consumption expenditure in 1957 (60.6%, 9.6% and 22.4% respectively). The remainder comprised increase in stocks (2.3%) and excess exports over imports (5.1%). Between 1951 and 1957, the consumption expenditure increased by 59.0% from \$328.6Mn to \$523.4Mn. Most of this growth, however, was between 1954 and 1957 (\$355.6Mn-\$523.4Mn, 47% growth), a phenomenon not unlike the growth of the GDP.

Private consumption expenditure expanded rapidly between 1951 and 1957, rising from \$205Mn to \$399Mn (constant 1951 prices). Such an increase was faster than population growth in the territory, as per capita private consumption went from \$316 in 1951 to \$458 in 1955 and \$522 in 1957. As a percentage of the GDP, the component improved from 62.3% in 1951 to 65.8% in 1955, only to drop off to 60.6% by 1957. The peak of 1955 is largely due to "heavy retro-active wage payments made towards the end of 1954".¹

General government consumption expenditure, as a proportion of the GDP, increased its share from 10.7% in 1951 to 12.6% in 1954, declining again to 9.6% in 1957. In absolute terms, expenditure increased from \$34.2Mn in 1951 to \$64.0Mn in 1956, but dropped

in 1957 to \$63.0Mn.*

Unlike the former two items, gross capital formation showed a decrease in its share of the GDP from 21.2% in 1951 to 19.6% in 1953 and 1954, but then increased to 22.4% by 1957. Actual annual expenditure in constant 1951 prices improved from \$69.8Mn to \$147.5Mn during the seven years in question.

Private Consumption Expenditure includes money spent for both goods and services. Expenditure on goods accounted for about 80% of the total, of which food expenditure was the largest item in 1958. At current prices, food expenditure was shown to rise from \$76.7Mn in 1951 to \$151.6Mn in 1957.² One would normally expect the proportion of expenditure devoted to food to decrease, given the rising standard of living in Trinidad and Tobago³ (see fig. 4.1 below). At current prices, the share of the private consumption expenditure on food increased from 37.4% to 38.0% during the period. Two reasons are given for this phenomenon. (1) There was a noticeable shift in consumer habits towards greater purchasing of meat, dairy products and other more expensive foodstuffs. (2) More important, however, is the fact that the Retail Price Index for food was 30% higher in 1957 than in 1951, as compared with

*Figures here only include recurrent expenditure incurred while providing basic services. Expenditure on capital and development works are excluded.

Figure 4.1 - Growth of Per Capita GDP, 1951-64 (in dollars)

1951	586.4
1952	585.5
1953	589.4
1954	628.7
1955	664.8
1956	675.2
1957	760.8
1958	774.8
1959	780.3
1960	812.9
1961	825.5
1962	826.4
1963	817.7
1964	784.4

Source: I. M. F. Report (1965), p. 18.

about 5% increase for all other sectors. The latter point is borne out by the statistics in table 4.2. (Note that in real terms and at constant 1960 prices the proportion of food spending declined).

The second largest item was clothing and footwear, and the decline in this sector was considerably greater than what it was in food expenditure. The share of this sector in private consumption expenditure decreased from 13.2% in 1951 to 10.3% in 1958, largely because of a drop in clothing prices of 5% between 1951 and 1957.⁴ Thus, at current prices, money spent on clothing was \$22.8Mn and rising to \$30.0Mn in 1957, as per capita spending on this item rose by only \$4, from \$35 to \$39.

In 1951 the third item of importance was drink and tobacco (8.9%). This proportion increased to 10.6% in 1956, but was low in 1958 (8.7%). It should be noted that 1960 and 1961 percentages were 10.5% and 10.4% respectively.

The items home maintenance and household goods warrant special attention. Given the housing shortage in Trinidad and Tobago, the former increased more rapidly than the latter (as would be expected), but only between 1951 and 1954. After 1954 the reverse effect set in, as household goods went from 6.8% of private consumption spending in 1954 to 9.8% in 1958, and home maintenance declined from 8.0% to 6.3% in the same period. It is suggested that "rent restrictions, the shortage of housing for rent, and the expensive land costs are some of the factors which may have helped to bring this about."⁵

Table 4.2

Private Consumption Expenditure in Real Terms
of Constant 1960 Prices (%)

(Selected Years)

	<u>1951</u>	<u>1954</u>	<u>1956</u>	<u>1958</u>
Food	39.5	39.0	38.2	38.6
Drink and Tobacco	8.9	9.5	10.6	8.7
Home Maintenance*	7.2	8.0	7.1	6.3
Household Goods	7.0	6.8	9.5	9.8
Clothing and Footwear	13.2	11.9	10.6	10.3
Other Goods	<u>6.5</u>	<u>6.4</u>	<u>6.5</u>	<u>6.7</u>
Total - Goods	80.3	81.6	82.5	80.4
Private Motoring, Travel and Communications	8.8	8.3	8.0	8.5
Domestic Service	1.5	1.7	1.2	1.1
Entertainment	2.0	2.0	2.0	2.1
All Other Services	<u>8.6</u>	<u>8.3</u>	<u>6.6</u>	<u>8.1</u>
Total - Services	20.9	20.3	17.8	19.8
Less Net Consumption expenditure of Non- Residents	-1.2	-1.9	-0.2	-0.1
Error**	-2.0	-	-0.1	-0.1
Total	100.0	100.0	100.0	100.0

*Rent, Rates, Water, Fuel and Light.

** The original table contains statistical errors, e.g. the components of "Goods" for 1951 add up to 82.3% instead of 80.3%. In 1956 and 1958 the grand totals come up to 100.1%.

Source: Rampersad, Frank: Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-61, Mona, Jamaica. Institute of Social and Economic Research, 1962, p. 53.

Taking the service sector as a whole, we find that its contribution to private consumer spending was low in 1956 (17.8%), but otherwise stayed at about 20%. This sector is, by nature, quite unstable and was somewhat vulnerable to certain forces at work in the economy, as a result of rapid growth. As such, special attention will be afforded the sector later in the chapter. Before leaving this topic, however, the item "Less Net Consumption Expenditure of Non-Residents" should be explained. These negative figures show that foreign travel and expenditures by residents on education and other services abroad have been higher than the money spent by foreigners (especially tourists) in Trinidad and Tobago. This factor is due to an under-emphasised tourist trade rather than to an abundance of students being educated abroad.

General Government Consumption Expenditure: The second largest item of consumer expenditure is capital formation, but, before we examine this vital part of the economy, we should survey briefly government consumption expenditure. Since the public sector is so important in this thesis, a discussion on its role in the economy will be more thoroughly developed later in this chapter. For the present, this treatment will serve as an introduction to the later discussion.

Comparing the growth of government consumption expenditure

with that of production, the rate of growth is slower in the latter during the 1950's prior to 1958. Table 4.3 contrasts these two growth rates, the indices of which are calculated from current operating costs in expenditure and current prices in production.⁶ A sudden change in the rate of growth of both items is at first evident in 1954, when the rate of general government product growth slowed after having kept pace with consumption expenditure to that point.

Table 4.3

Index of Growth in the Public Sector (Current Prices)

	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>
Government Consumption Expenditure	100	115.0	120.8	127.7	134.1	145.3
Product of General Government	100	114.2	119.1	127.1	127.1	129.5
	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	
Government Consumption Expenditure	137.2	150.3	152.2	157.0	162.0	
Product of General Government	127.3	141.0	151.2	169.0	180.3	

Source: Rampersad, Frank: Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-61, Mona, Jamaica, Institute of Social and Economic Research, 1962, p. 38.

Thus while consumption expenditure was expanding from 127.7% of the 1951 figure to 145.3% by 1956, production only improved from 127.1% to 129.5%. Both suffered a decline in 1957, the former being cut back more than the latter.* The 1958 increase was comparable as consumption went from 137.2% to 150.3% and production from 127.3% to 141.0%. Hereafter, the relative expansion of both items indicated an important and somewhat dramatic shift as the development

Table 4.4

Capital Formation Expenditure (\$Mn - current prices)

	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>
Oil and asphalt	35.2	40.6	48.9	66.7	71.7
Sugar and rum	1.6	5.3	5.1	6.4	7.3
All other industries and services	20.6	30.3	31.9	50.4	66.8
Public enterprise	4.4	5.7	5.5		
General government	10.2	13.2	13.3	21.6	33.2
Housing	<u>12.4</u>	<u>13.7</u>	<u>16.1</u>	<u>16.2</u>	<u>16.6</u>
Total Gross Domestic FIXED Capital Formation	84.4	108.8	120.8	161.3	195.6
Add Change in Stock	+7.3	+6.7	+4.7	+11.2	+10.6
Total Gross Domestic Capital Formation	91.7	115.5	125.5	172.5	206.2

Source: Collaboration of data from Trinidad and Tobago Government: I.M.F. Report of Trinidad and Tobago 1965 (Table B) and Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port-of-Spain (Government Printery), 1958, p. 76.

*See discussion on Trinidad and Tobago's dependence on world economic trends - Chapter VII, section on "Needs vs Reality".

plan was commenced. Public expenditure was then directed more towards the production of goods and services, and the creation of capital assets, decreasing its former emphasis on mere maintenance. It should be noted, however, that government expenditure resulted in the expansion of the private, as well as the public sector product, since some government contracts were awarded to private enterprise. Recurrent government expenditure increased from \$46.7Mn in 1951 to \$80.8Mn in 1957, showing steady growth throughout. (See table 4.1).

Capital Formation: Capital expenditure in the government sector has been closely related to government production, and, where it has been classified as Capital Formation,* it contributed 17.3% of total fixed capital formation in 1954 (public enterprise plus general government) (see table 4.4, above). It was 17.4% in 1955, but declined to 15.6% and 13.4% in the next two years respectively, before returning to 17.0% in 1958. Gross Domestic Fixed Capital Formation (GCF) increased its share of the GDP from 22.3% to 33.3% between 1951 and 1959, growing "at an average annual rate of 11.3%

*A distinction ought to be made between government current production and capital formation. In the case of the former, current output is valued at the cost of factor services in the absence of a market for the commodity (e.g., defence, education and civil service), or at market price for marketable produce (e.g., electricity, transport and water). Capital formation, on the other hand, refers to changes in the net value of the public sector (e.g., buildings, plant and equipment for generating electricity, buses).

over the decade,"⁷ although there was a decline in share to 29.5% in 1960 and 26.8% in 1961. Table 4.5 indicates substantial increases in real fixed capital formation in 1954, 1955, 1957 and 1959, but in 1960 and 1961 there were decreases in the total. These absolute decreases were slight, and the large percentage drop (i.e. GCF as percentage of GDP) was due to the large increase in both imports and exports after 1959* (see table 7.2 - Chapter VII).

The largest contributor to GCF was the oil and asphalt sector. Its share in the country's fixed capital formation from 1954 to 1958 was as follows: 41.7%, 37.3%, 40.5%, 41.4% and 40.7% (Table 4.4). According to table 4.5, the government sector was next in size, with "New Dwelling Houses" third, closely followed by "manufacturing". To really appreciate the significance of capital formation in the various sectors, we must compare it with the output in these sectors. Fig. 4.2 attempts to put such a comparison into perspective as it indicates the percentage of the GDP represented by the GCF between 1951 and 1962. The average percentage of the GDP comprising the GCF during the period was 23.6%, as the latter increased its share from 21.0% in 1951 to 27.8% in 1962. The peak year was 1960, and the lowest was 1953. Growth during the

*1960 was one of the two years since 1951 that has had a negative balance of trade (see table 4.1). Note also that the change in stock was negative in 1961.

Table 4.5

REAL FIXED CAPITAL FORMATION BY SECTORS

\$mn. 1960 Prices

	1951	1952	1953	1954	1955	1956
Oil and Asphalt	49.5	46.3	46.8	54.2	58.9	64.6
Sugar	2.0	1.9	2.0	1.8	7.5	4.1
Manufacturing	11.7	11.8	6.3	7.4	9.8	13.3
Agriculture	2.5	2.4	2.9	2.1	4.3	4.4
Rest of Private Sector	23.5	27.2	30.8	33.9	39.4	40.0
O/W New Dwelling Houses	10.3	11.8	14.7	15.4	16.3	18.7
Other Private Sector	13.2	15.6	16.1	18.5	23.1	21.3
Public Sector	11.9	14.1	17.4	18.2	22.8	22.0
Public Utilities	3.7	4.1	5.3	5.5	7.1	6.8
Other Public Sector	8.2	10.0	12.1	12.7	15.7	15.4
Total	101.1	103.4	106.2	118.6	142.7	148.4

	1957	1958	1959	1960	1961
Oil and Asphalt	93.9	89.0	121.8	101.6	91.3
Sugar	4.6	5.8	5.0	4.1	4.8
Manufacturing	17.8	19.3	16.7	13.1	19.8
Agriculture	7.1	8.3	8.6	5.0	5.9
Rest of Private Sector	58.5	69.1	76.4	97.3	91.9
O/W New Dwelling Houses	17.9	17.8	20.4	22.7	21.3
Other Private Sector	38.6	51.3	56.0	74.6	70.6
Public Sector	24.6	36.6	45.4	47.1	51.9
Public Utilities	6.5	8.0	12.5	17.1	14.3
Other Public Sector	18.1	28.6	32.9	30.0	37.3
Total	204.3	227.9	273.9	268.2	265.1

Source: Rampersad, Frank: Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-61. Mona, Institute of Social and Economic Research, 1962. p. 65.

Table 4.6

PERCENTAGE CONTRIBUTION TO GDP AND GCF BY SECTORS - SELECTED YEARS

	1951		1954		1955	
	GCF	GDP	GCF	GDP	GCF	GDP
Agriculture	2.5	17.3	2.6	16.5	3.0	16.5
Oil and Asphalt ^a	49.0	28.9	45.7	27.2	41.3	27.4
Sugar	2.0	2.6	1.5	2.7	5.3	2.6
Other Manufacturing ^b	11.6	10.1	6.2	10.1	6.9	9.5
Rest of Private Sector	23.2	26.8	28.6	28.3	27.6	30.3
Public Sector	11.8	14.3	15.3	15.2	16.0	13.7
Total	100	100	100	100	100	100

	1957		1959		1960		1961	
	GCF	GDP	GCF	GDP	GCF	GDP	GCF	GDP
Agriculture	3.5	14.8	3.1	12.4	1.9	12.7	2.2	12.1
Oil and Asphalt ^a	46.0	30.3	44.5	31.4	37.9	30.7	34.4	32.0
Sugar	2.3	1.9	1.8	1.7	1.5	2.0	1.7	2.0
Other Manufacturing ^b	8.6	10.4	6.1	10.7	4.9	10.7	7.5	10.6
Rest of Private Sector	27.7	30.4	27.9	31.9	36.3	31.8	34.7	31.2
Public Sector	12.0	12.2	16.6	11.8	17.6	12.2	19.5	12.1
Total	100	100	100	100	100	100	100	100

^a Asphalt excluded in 1960 and 1961.

^b Asphalt included in 1960 and 1961.

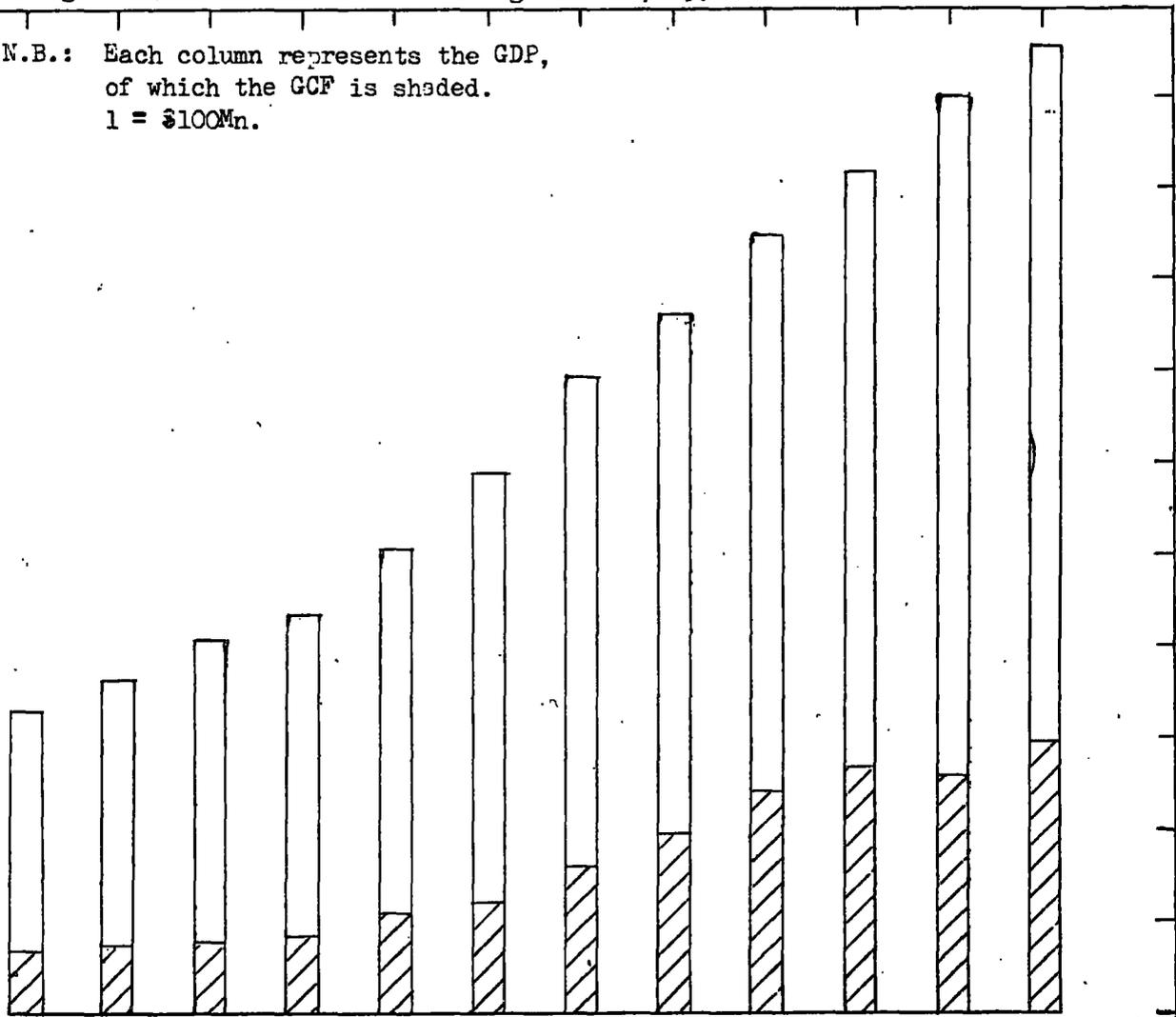
GCF = Gross Domestic Fixed Capital Formation in Real Terms.

GDP = Gross Domestic Product at Factor Cost in Real Terms.

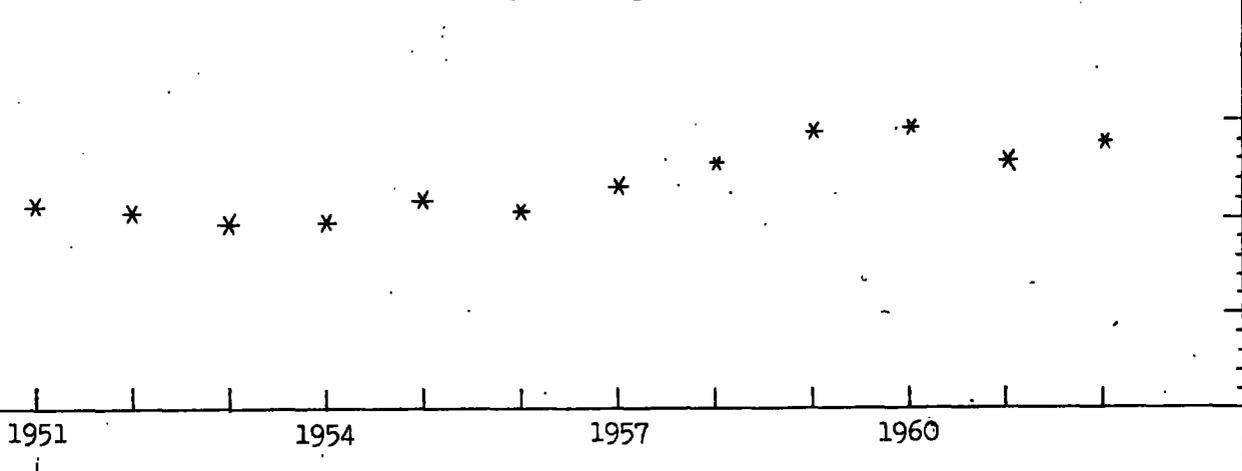
Source: as that of table 4.5, p. 63.

Figure 4.2 - GCF as a Percentage of GDP, 1951-62.

N.B.: Each column represents the GDP,
of which the GCF is shaded.
1 = \$100Mn.



N.B.: Each star represents the percentage of the GDP that is the GCF.



Source: I.M.F. Report (1965).

first three years was slow, but the rate increased almost steadily to 1959. The increase from 1959 to 1960 (\$242.6Mn to \$268.3Mn) is a little over 10%, after having almost trebled from 1954 to 1959. Nevertheless, the GDP growth rate was also slow from 1959-1960, hence the increase in share from 28.7% to 29.2%. In 1961, capital formation was actually less than in 1960.

The above percentages are necessarily high, in comparison to certain selected countries, in this early stage of economic development.* 1956 data reveals Jamaica's GCF as only 14.5% of its GDP. In the U.K. it was 15.4% and for the U.S., 17.5%. Trinidad and Tobago's figure of 20.5% was "somewhat less than [that of] Puerto Rico and [that of] Japan"⁸ and much less than Canada's 25.6%.

We will now examine the contributors to the GCF (see table 4.6). Throughout the period of from 1951 to 1959 when most refinery expansion was nearly completed, the total contribution by the oil and asphalt sector to real GCF was over 40%. Even after completion of expansion in the refineries, oil well drilling and other

*This is meant merely as a comparison of percentage capital expenditure with other small-scale economies, e.g. Jamaica and Puerto Rico. Of greater significance, however, is the importance of the oil sector as a generator of value added in the economy. Furthermore, if one identifies two other large-scale economy-types of (a) Japan and Canada (still rapidly expanding) and (b) U.K. and U.S. (mature), evaluation of other factors, e.g. per capita and absolute consumption expenditure, social overhead capital, levels of welfare economics etc., would need to be considered.

capital works accounted for over one-third of the fixed capital (table 4.6). It is, however, interesting to note that the output in this sector averaged just under 30% of the GDP. This kind of comparison gives a general idea of the relative capital intensities of the various production sectors. It is also meant to show which of the important producing sectors were large investors in capital formation. (Fig. 4.3 should also be considered here.)

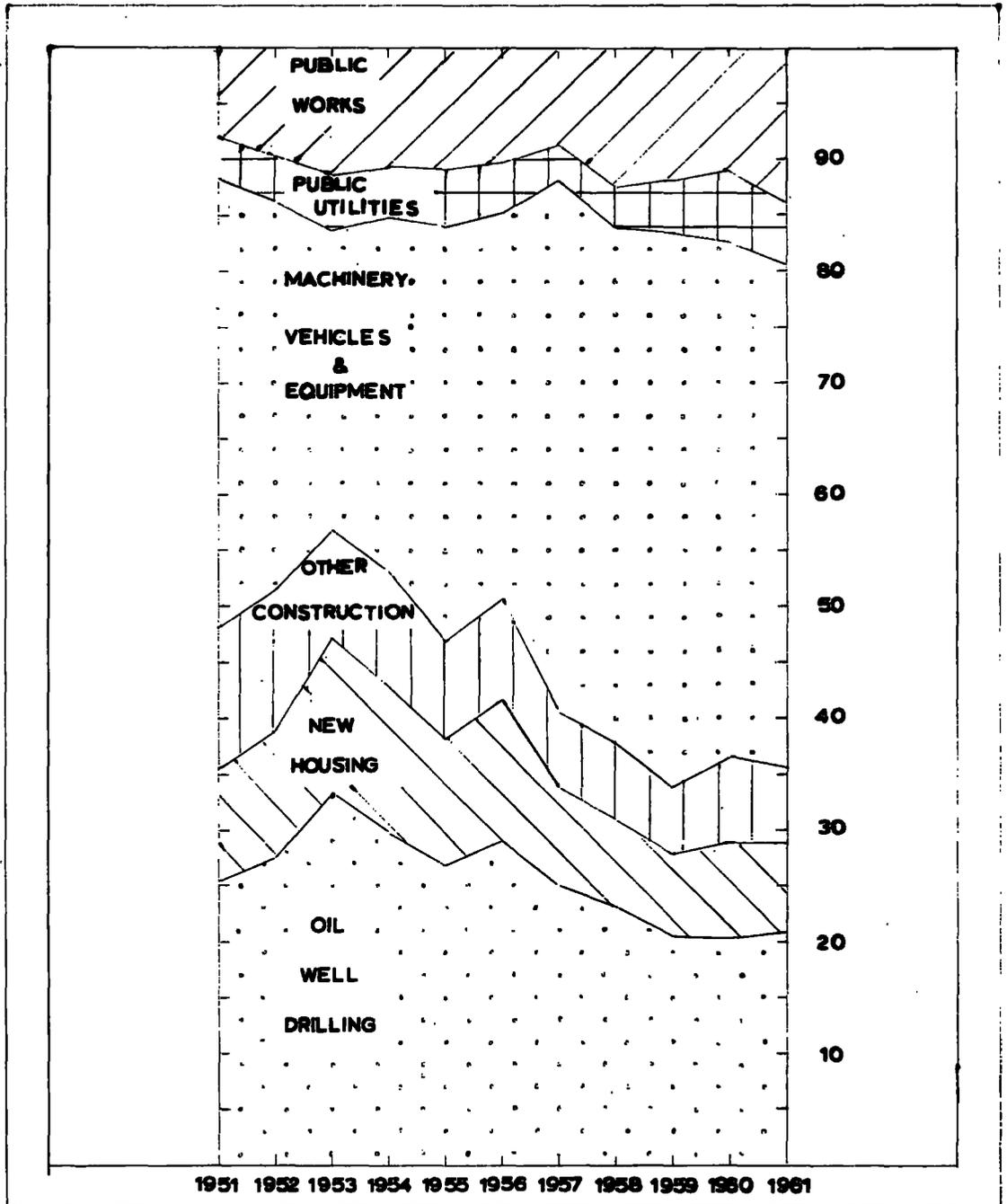
In sharp contrast to oil and asphalt is agriculture, which contributed less than 4% of the GCF throughout the period under survey and whose output averaged about 14% of the GDP.

Similarly, sugar had a small share in fixed capital formation. Moreover, its contribution to the GDP was also small, but as an export product, sugar was relatively more important than agriculture. Apart from the unusually high figure of 5.3% for 1955, its share in fixed capital formation averaged about 2%. Its output averaged just over 2% of the GDP.

Other manufacture ranks fourth in importance as an investor in fixed capital formation, but apart from 1951 (11.6%), the sector accounts for only 7% of the GCF on an average. Its output averaged a little in excess of 10% of the GDP for the decade, however.

The rest of the private sector contributed between 23% and 37% of the real GCF, as such investment kept pace with the

Figure 4.3 - Percentage Contributions of Components of GCF, 1951-61.



Source: Rampersad (1962), p. 63.

proportional output over the decade. An important component of the sector was housing (see table 4.5), accounting for a large proportion of the fixed capital formation in the sector as well as averaging over two-fifths of the output of the sector prior to 1957. It fell off to roughly one-quarter between 1957 and 1961. The rest of the private sector is second to oil and asphalt in both capital formation and output.

The public sector saw a general increase in its share of the GCF (11.8% to 19.5%). It was the only sector to do so with the exception of that part of the private sector other than agriculture and manufacture. Such a phenomenon is largely due to the expansion of pioneer industries during the 1950's and to the First Five-Year Development Programme (1958-62). Like petroleum, the output remains a lower percentage than capital formation.

Many questions may have arisen during the preceding description of the "physical" structure of the GCF. A few brief explanations are, therefore, immediately needed, although a further discussion on the process of capital formation will be taken up in the section on the behaviour of "the Economy prior to the Development Programme".

First, one should bear in mind that the oil and asphalt sector is so highly capital-intensive that it dwarfs the contributions of capital investments by other sectors in which capital

formation is a relatively smaller proportion of their total production costs.

The second point has already been suggested: the role played by the public sector as a prime mover in the economy. The government awarded certain contracts to private firms, which were further subsidised. Many of the costs, including the subsidies, are registered as capital formation by the public sector, but the products arising from these capital assets fall in the private sector. Thus the government, like the oil industry, is highly capital-intensive, and together they take the leading role in the economic development of the country.

By approaching the GCF from the angle of various types of assets, a few more points are raised which will help to introduce some vital influences to the behaviour of the economy. Fig. 4.3 lists these assets, and shows their respective shares in the GCF.

Oil well drilling was a fast-growing capital asset prior to 1956, and especially after 1954. This is because of the commencement of drilling in the Gulf of Paria in 1955. Marine drilling had proved significantly more expensive than had land exploration. Nevertheless, the industry was, at that time, facing possible decline,⁹ and oil production in the Gulf was a welcome addition to total production. By 1961 marine wells were producing 25% of the total crude oil.¹⁰ In spite of increased marine drilling and the

high costs of exploration, the proportion of investment resources used up in this sector has not grown as fast as capital formation in the economy in the long run, over the decade, and especially since 1956. This factor is a result of the rapid increase in expenditure on capital assets in the other sectors. These types of assets will now be discussed.

The fastest growing of these assets is government public works. Its capital formation was four-and-one-half times greater in 1961 than 1951 (see table 4.5). With public utilities growing to almost four times its 1951 capital formation figure, the entire government sector increased its capital formation more rapidly than did the other types of assets.

Evidence of the rapid expansion in oil refining in the 1950's is indicated by the rapid growth of capital assets in machinery, vehicles and equipment. Growing from \$40.6Mn in 1951 to \$119.0Mn in 1961, capital assets almost trebled. The peak year was 1959 when total expenditure was \$135.9Mn of the \$273.9Mn spent on fixed capital formation for the entire economy (compare fig. 4.3 with table 4.5). Prior to 1956, there was a decline from 40% to 35% of the GCF, followed by a rapid increase to 45% in 1961. The reasons for such rapid expansion in investment in the heavy industries are fourfold: (1) The expansion of the oil industry; (2) the incentive created by the Aid to Pioneer Industries Ordinance; (3) rapid expan-

sion and mechanisation in the construction industry; and (4) the growing appetite of the service sector for vehicles, machinery, appliances etc., e.g. transportation and communication. The first point was easily most significant, as the petroleum industry bought most of the machinery, vehicles and equipment, thus indicating the increased dependence of the economy on that sector.

The other assets (new dwelling houses and other construction) both relate to the construction industry and, although they expanded significantly, their rate of growth was slower than that of the GCF.

If oil well drilling and machinery, equipment and vehicles are taken together, the other assets represent investment in social and other overhead capital. Of interest is the observation that, despite the large increase in the share of the public sector in the GCF, the proportion of social and other overhead capital is about the same in 1951 as in 1961. The percentage of fixed capital formation allocated to oil well drilling, and to machinery, vehicles and equipment was 65.6% in 1951, 61.3% in 1954, 69.3% in 1958 and 65.7% in 1961.

Importance of Trade: Trinidad and Tobago's balance of visible trade was favourable for all but two years between 1951 and 1964 (see table 4.1). In 1952 imports exceeded exports by \$5.5Mn at current prices,

while in 1960 the excess was \$10.5Mn. From 1951 to 1954 and in 1957 the value of exports was more than half of the GDP. Imports, too, were over half of the GDP in 1951 and 1952, as both items exceeded 40% prior to 1960. The country's dependence on trade stands in sharp contrast to that of the United States, whose imports and exports were both about 4%. However, Trinidad and Tobago's trade ratios are similar to those of Puerto Rico, and three times as high as those of the United Kingdom.¹¹ Like Puerto Rico, by virtue of its size, Trinidad and Tobago needs to maintain a high volume of trade as an assurance to economic development.

During the 1950's the export of foreign produce (re-exports) was only about 2% to 4% of total exports (see table 4.7).

Table 4.7

	<u>Balance of Visible Trade (\$Mn. - current prices)</u>							
	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
Exports of Domestic Produce	223.3	251.3	257.2	279.0	322.0	380.0	412.7	434.9
Exports of Foreign Produce	<u>6.5</u>	<u>5.2</u>	<u>4.4</u>	<u>6.3</u>	<u>8.1</u>	<u>12.6</u>	<u>12.2</u>	<u>14.2</u>
Total	229.8	256.5	261.6	285.3	330.2	392.6	424.9	449.1
Imports	243.7	236.0	249.5	294.4	301.5	355.8	412.0	448.1
Balance of Visible Trade	-13.9	20.5	12.1	-9.1	28.7	36.8	12.9	1.0

Source: Trinidad and Tobago Central Statistical Office, Overseas Trade Report, 1960, Introduction p. 10.

Such a low figure by no means reflects the high import content of the Demand Components in Trinidad and Tobago.

Table 4.8 shows the high import content of supplies of capital formation, consumption and exports. In the supplies component, the imports of goods and services averaged 38% at current prices (about 42% at constant 1951 prices). The discrepancy between current and constant prices here reflects a phenomenon whereby domestic prices were rising, while import prices remained constant. This topic will be discussed later in this section.

The import content of capital expenditure is very high, straining the balance of payments. Averaging 52% over the period, the figures range between 35% in 1953 and 63% in 1955. Excluding stocks, the average would be 44%.¹²

The import content of consumption expenditure averaged about 40.3%, with some indication that domestic consumption was increasing faster than consumption of imported goods and services after 1953. The expansion of the local manufacturing industries is a significant factor, as import substitutes increased during the 1950's. The occurrence of increasing domestic prices, however, is a more decisive factor to be considered. The percentage of imports declined steadily from a peak of 45.3% in 1952 to 36.0% in 1958.

In the export component, the import percentage declined from a peak of 38.6% in 1952 to 27.3% in 1957, before increasing

Table 4.8

Import Content of Demand Component, (1951-59)

\$ million

Year	Supplies at Current Prices			Supplies at Constant 1951 Prices			Capital Formation,* Current Prices.		Consumption, Current Prices		Exports, Current Prices	
	Total	Imports of Goods and Services	Import Content %	Total	Imports of Goods and Services	Import Content %	Total	Import Content %	Total	Import Content %	Total	Import Content %
1951	567.5	238.9	42.1	567.5	238.9	42.1	85.3	53.1	240.2	44.6	241.5	35.7
1952	625.2	266.3	42.6	593.4	253.1	42.7	94.5	46.2	273.0	45.3	257.7	38.6
1953	662.4	260.4	39.3	610.2	261.2	42.8	85.9	34.8	290.4	44.9	286.1	35.3
1954	707.3	276.7	39.1	638.8	283.2	44.3	91.7	57.4	322.9	41.2	292.7	31.2
1955	821.0	321.6	39.2	721.9	316.3	43.8	115.5	62.9	386.6	39.4	318.9	31.2
1956	914.0	332.2	36.3	808.6	318.8	39.4	123.5	54.3	417.9	38.5	370.6	27.5
1957	1081.8	395.3	36.5	900.1	366.7	40.7	172.5	56.1	464.3	38.1	445.0	27.3
1958	1206.9	454.1	37.6	1012.5	436.2	43.1	196.0	55.4	531.0	39.0	479.9	31.8
1959	1324.2	500.2	37.8	1096.4	489.4	44.6	230.7	52.8	580.3	36.4	507.1	32.2

*Includes changes in stocks.

Source: National Income and Trade Reports.

Source: Rampersad, Frank: "External Trade and Payments of Trinidad and Tobago, 1951-59."
Social and Economic Studies, vol. 12, no. 2, 1963, pp. 101-40.

again. This factor is largely related to the import of crude oil to meet the refinery capacity. The finished product is then exported.* The average import share of export values for the period was about 32%.

The high import content of the demand component at first seems to be indicative of the volume of foreign investment in the economy.** Nevertheless, despite a generally favourable balance of trade, the outflow of investment income influenced an adverse balance of payments. In table 4.1, column (6), net factor income payments abroad grew from \$27.4Mn in 1951 to \$117.6Mn in 1959 (8.3% and 13.9% of the GDP respectively). This income payment is the difference between the GDP and the Gross National Product (GNP). The GNP, therefore, did not grow as fast as the GDP during the

*Owing to the decrease in local production, crude oil had to be imported in increasing quantities mainly from Venezuela and Saudi Arabia (see Chapter VII). Besides crude oil, bauxite was imported from Guyana (then British Guiana) to be refined and re-exported.

**In more fundamental terms, however, the high import content here reflects the severely limited nature of the domestic capital goods sector, the low level of development of local food production, the small size of local manufacturing activity and the tremendous social pressures from the demand component for a certain type of expenditure. Thus, given the smallness of the country's economy and the poor and highly-skewed natural resource base, a very high import coefficient (total imports/GDP + imports) is likely, even if, in some hypothetical situation, local funds financed all capital formation.

Table 4.9

	<u>Balance of Payments (\$Mn - current prices)</u>								
	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
1. Exports of goods and services	245.8	262.2	290.7	298.1	325.1	376.7	451.6	488.2	515.9
2. Net Investment income paid abroad	28.6	23.2	34.5	30.1	37.7	70.8	110.9	79.4	104.7
3. Import Capacity (1 - 2)	217.2	239.0	256.2	268.0	287.4	305.9	340.7	408.8	411.2
4. Import of goods and services	238.9	266.3	260.4	276.7	321.6	332.2	395.3	454.1	500.2
5. Import Surplus (3 - 4)	-21.7	-27.3	-4.2	-8.7	-34.2	-26.3	-54.6	-45.3	-89.0
6. Net Transfers to abroad	-1.1	-1.9	-1.0	-3.4	-5.8	-4.9	-5.3	-7.1	-5.2
7. Balance of payments deficit on current accounts (5 - 6)	-22.8	-29.2	-5.2	-12.1	-40.0	-31.2	-59.9	-52.4	-94.2

Source: Rampersad, Frank: "External Trade and Payments of Trinidad and Tobago, 1951-59." Social and Economic Studies, vol. 12, no. 2, 1963, p. 116.

period.

The balance of payments deficit is largely caused by such income payments abroad. "The net investment income paid abroad" (see table 4.9) differs from column (6) of table 4.1, in that the former includes "only factor payments concerned with property. This means . . . profits, rents, dividends and interest."¹³ Wages and salaries are included in the imports and exports. (The import of goods is at c.i.f. and export at f.o.b.). Net investment income paid abroad does not include labour costs other than wages and salaries, since net factor income equals the sum of investment income and labour costs (table 4.10). Investment income going abroad increased from 16% of total exports in 1951 to over 20% in 1959

Table 4.10

	<u>Net Investment Income</u>								
	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>
Investment Income	-30.1	-24.6	-35.8	-31.2	-38.8	-72.6	-112.6	-94.5	-122.5
Labour Income	2.7	2.8	2.7	3.3	4.0	3.9	4.0	5.3	4.9
Factor Income	-27.4	-21.8	-33.1	-27.9	-34.8	-68.7	-108.6	-89.2	-117.6

Source: Trinidad and Tobago Government: I.M.F. Report of Trinidad and Tobago, 1965. (Official-unpublished), p. 22.

(\$530Mn) and was the most crucial factor limiting the import capacity. Only in 1952 did it fall to less than 10% of export earnings. In 1957 and 1959, however, it was over 20%. Although the high imports put an inevitable strain on the balance of payments, imported capital did increase domestic production as well as increasing the volume of exports. In the Trinidad and Tobago experience, the high and increasing rate of investment income leaving the country was so much greater than exports that the import surplus had increased four-fold.¹⁴ The fact that there is a surplus in visible and invisible trade (\$217Mn, 39% of outgoing investment income) indicates a low rate of imported capital. This is because a large proportion of the foreign capital was used in "mining and agricultural sectors which are both geared to an export market"¹⁵ (see table 4.5). Relatively little foreign capital had been spent on enterprises geared to local markets. Nevertheless, export earnings in Trinidad and Tobago in the 1950's tended to have a large multiplier effect in the economy, so that a curtailment in this type of earning capacity to favour domestic markets would have been undesirable.

Trade in goods and services, as we have seen earlier, is vital to the economy of Trinidad and Tobago. Trade in services was about 12% of the total value of trade from 1951 to 1959, and its growth, resembling that of visible imports and exports, had more than

doubled in that period. The balance of trade in services had been favourable every year from 1951 to 1959; the totals in imports and exports for that period were \$174.9Mn and \$204.4Mn respectively, with a total balance of \$29.5Mn.¹⁶ In both imports and exports, foreign travel was dominant, contributing 46.1% of the former and 41.0% of the latter. Foreign travel (mostly tourism) brought \$83.7Mn into the country, but exports also included "the employment of local personnel by foreign nationals . . . and the brokerage on imports paid to local agents".¹⁷ Foreign travel by local residents cost the country \$80.7Mn, so that the net gains in foreign travel were only \$3.0Mn. There are two main reasons for this: (1) the increasing volume of holiday and business travel by locals and (2) the lack of emphasis in tourism in Trinidad and Tobago.

The expenditure on travel by local residents grew faster than the population during the period in question (\$5.5Mn to \$14.4Mn), and holiday travellers spent more than half of the total. This is a fair reflection of the rising standard of living in the country in the 1950's. There was also growing efficiency in the availability of travel information and other related facilities. Holiday benefits were becoming increasingly favourable to employees, and the increase of tourists into the country (though small), along with other imported influences, set in motion a demonstration effect which, itself, increased the desire for international contact. The

accumulated expenditure of students abroad was another significant factor in this component of service imports, as the awareness of the need for more advanced education, most of which was unavailable locally, increased.

In 1956, a Tourist Board was established, and the Ministry of Industry and Commerce had its responsibility extended to include tourism. Receipts from travel into the territory increased from \$6.0Mn to \$14.8Mn between 1951 and 1959, and the number of "tourists" was just doubled within that period (63,549 to 128,546).¹⁸ An acute shortage of hotel rooms and overall inadequacy of accommodation had combined with a lack of publicity, to produce an adverse effect on what could otherwise have been a booming tourist industry. The number of people who actually stopped over in Trinidad and Tobago during the period grew appreciably from 15,773 to 42,043, but this does not compare favourably with Barbados or Jamaica (see also Chapter VII).

Having surveyed trade in services, we now discuss the trade in goods. Much has been said previously about the latter, in terms of production, and especially with reference to manufacture. In the following paragraphs trade will be related to the movement of prices. A few aspects of the imports of goods in the 1950's stand out. Firstly, imports were a dominant feature in the demand components. Secondly, the relatively more stable import prices tended to

depress the buoyant tendencies of local prices. Thirdly, the import prices of capital goods tended to increase more rapidly than other import prices, and finally, the rising volume of imported goods bears no noticeable relationship to import prices. In table 4.11, a comparison of columns 6 and 4 reveals a tendency of imports to increase irrespective of price increases, indicating the elasticity of demand for imported goods.

Export prices increased much more than did import prices. Growth fluctuated, and it is interesting to note that the direction of movement of prices after 1956 is identical for both imports and exports. Petroleum products provided over 80% of the exports between 1952 and 1957, and the Suez crisis of 1956 caused oil prices to rise in the following year (hence the large increase in the export index from 107.0 to 119.2, and the lesser increase in import prices - 104.2 to 107.8). The discovery of large quantities of crude oil in other parts of the world, and low production costs in these parts, later forced prices down once more.¹⁹

Sugar prices were generally favourable throughout the decade. Other agricultural export crops were favourably affected by the Korean War until 1954, when certain primary commodities, such as cocoa, coffee and citrus had price increases of up to 41% of the 1951 index. Following the war, however, prices declined sharply, so that in 1957, despite premium prices received for

Table 4.11

Visible Trade (1951-59)

	1951	1952	1953	1954	1955	1956	1957	1958	1959
(1) Imports \$m.	218.6	243.7	236.0	249.5	294.4	301.5	355.8	412.0	448.1
(2) Exports \$m.	214.5	229.8	256.5	261.6	285.3	330.1	392.6	424.9	449.1
(3) Trade Balance \$m.	-4.1	-13.9	-20.5	+12.1	-9.1	+28.6	+36.8	+12.9	+1.0
(4) Imports (volume) Index	100	106.2	108.7	116.7	133.2	134.4	153.8	184.4	203.7
(5) Exports (volume) index	100	103.9	113.8	112.8	122.2	147.2	155.4	169.7	194.3
(6) Imports (average values) index	100	105.6	99.4	97.0	101.5	104.2	107.8	104.1	102.3
(7) Exports (average values) index	100	104.2	107.6	110.7	111.5	107.0	119.2	112.0	110.3
(8) Terms of trade index	100	98.7	108.2	114.1	113.8	102.7	110.4	107.7	107.8
(9) Import equivalent of exports. \$m.	214.5	217.6	258.0	269.6	281.1	316.8	364.2	408.2	439.0
(10) Real exports \$m.	214.5	220.5	238.4	236.3	255.9	368.5	329.9	379.4	407.2
(11) Gains from terms of trade \$m.	—	-2.9	19.6	33.3	25.2	8.3	34.3	28.8	31.8
(12) Imports per capita \$	337	368	348	358	409	406	466	523	548
(13) Exports per capita \$	331	347	378	375	396	445	513	539	550

Notes:

- (1) Except where otherwise stated, current prices are given.
- (2) Imports valued at c.i.f., exports at f.o.b.
- (3) Import equivalent of exports was derived by dividing exports in current value by an index of import prices.
- (4) The terms of trade index is the quotient of the index of export prices divided by the index of import prices.
- (5) The gains from the terms of trade are measured from 1951, the base date of the relevant indexes used in their computation.

Source: Rampersad, Frank: "External Trade and Payments of Trinidad and Tobago, 1951-59." Social and Economic Studies, vol. 12, no. 2, 1963, p. 128.

domestic cocoa and coffee (because of their high quality), their prices were 11% less than those of 1951, and 52% below those of 1954.²⁰

THE ECONOMY

PRIOR TO

THE DEVELOPMENT PROGRAMME

Dependence on Petroleum: The entire economy of Trinidad and Tobago is heavily supported by the petroleum industry and balances precariously on the fortunes of it. Between 1953 and 1957, the percentages of the annual government revenue derived from oil were 37.5%, 35.2%, 38.1%, 37.2% and 44.1%, respectively. Small wonder then that the expansion of this industry is correlated so closely with growth in the public sector and in the economy as a whole.

Apart from the direct contribution to government revenue, petroleum's boost to the private sector is widespread. Some of the fastest-growing towns in the 1950's were near the refineries. Among the most notable were Point Fortin, Marabella (plus San Fernando), and La Brea. Table 4.12 shows towns associated with the oilfields (underlined) among selected settlements, and their growth from 1956

to 1960.*

Moreover, the oil companies have been directly responsible for a large proportion of the capital formation in the country. A great deal of the heavy-industry assets (machinery, vehicles and equipment - see fig. 4.3) are bought by them.

The direct use of public utilities and other private sector

Table 4.12

Population Growth in Selected Settlements

	<u>1956</u>	<u>1960</u>
<u>Chaguanas</u>	2,900	3,500
<u>Rio Claro</u>	1,800	2,200
<u>Gasparillo</u>	3,800	4,800
<u>Princes Town</u>	6,000	6,700
<u>Vistabella</u>	1,400	2,100
<u>Marabella</u>	3,600	5,400
<u>Siparia</u>	3,600	4,200
<u>Penal</u>	3,000	3,600
<u>Fyzabad</u>	1,600	1,900
<u>La Brea</u>	3,800	4,800
<u>Point Fortin</u>	6,900	8,800

Source: The Nation, weekly newsletter no. 9
15th April 1966. (reprint)

*Of the selected towns, Siparia, Chaguanas, Princes Town and Rio Claro are administrative centres. Furthermore, the growth in St. George County and the Caroni sugar belt reflect rapid urbanisation along the main roads in the area. Herein is the development of the conurbation which fans out from Port-of-Spain (see Chapter II).

production by the petroleum industry deserves special notice. Although some of the oilfields generate their own electricity, the industry as a whole used a great deal of the total output of the government-owned Trinidad and Tobago Electricity Board. The refineries also used significant amounts of water, as well as other public services. On the whole, their part in generating economic activity in the rest of the private sector is hinted at by the growth of towns related to the oilfields.

Of the other sectors of the GDP which grew as fast as the petroleum sector, the largest - services and construction (see tables 3.1 and 3.2) - owe their prosperity to the general nature of the economy. In other words, these sectors are not potential prime movers. In contrast, the manufacturing industries expanded their capital assets quite rapidly in the early 1950's. But the greatest increase in output came in the latter part of the decade. Expansion in the other sectors was slower than the GDP.

Trinidad and Tobago's dependence upon petroleum during that decade, and especially at the beginning, left the economy particularly vulnerable. Prior to 1955, known oil reserves were running low, to the grave concern of the management in many companies. The post-war years had seen relatively little expansion in local crude oil production, with average outputs staying around 60,000 barrels per day from 1940 to 1952.²¹ The only hope left, after 1953, was to

increase the intensity of drilling the already-proven wells, thus increasing the already high costs of production. Indeed, when the Trinidad Oil Co. decided to sell out its shares to the Texas Oil Co. in 1956, it was because the former could no longer compete with most of its local rivals, some of whom had for support sister companies in other low-cost oil-producing countries, or refineries in the advanced countries, (e.g. the U.K.), or both.²²

The primary sector was losing importance to the petroleum industry as an export earner (see table 3.2). The service sector was characterised by underemployment and poverty, although the sector as a whole witnessed a rapid rate of growth. It is because this sector had probably the widest discrepancy in income levels of any in the GDP (see Chapter III). In the 1950's the Aid to Pioneer Industries project had initiated a fairly rapid expansion in the manufacturing sector. The labour capacity was accordingly increased, but immigration of people in search of jobs from the relatively less prosperous British Lesser Antilles was high. This easily offset the part of the local labour force that emigrated, mostly to England and North America, and kept a fairly constant unemployment gap.

Mr. Champion may have been inaccurate in his prediction that the petroleum industry would collapse after 1954; his observations of the vulnerability of the economy are valid, however.²³

Had new reserves not been discovered (in 1956), disaster would have come much sooner than most people realised. Deceived by the short-sightedness of the political leaders in the territory and encouraged, first by the short-term increase in job opportunities, and after 1954, by the output of the rapidly expanding oil industry, the people did not recognise the critical nature of the economy. The situation in the oil industry may not have been so critical in the early 50's, had it not been for the excessive demands of World War II. Upon request from the Allies, the oil reserves had been heavily tapped to meet these demands.²⁴

Nevertheless, the clouds were gathering around the economy by 1954, and certain natural resources that could have laid the foundation for continued prosperity were going largely unexploited. Probably the most significant of such resources were tourism and fisheries.

Under-explored Resources: With the expanding economies of North America and Western Europe, their travellers provided a boost to the tourist trade of many developing countries bordering on the Atlantic. Trinidad and Tobago's main disadvantage was its location relative to the other West Indian islands. Being further south there was somewhat less attraction than Jamaica, the Virgin Islands, the Bahamas, Puerto Rico and Bermuda. (Travel costs

from North America to Trinidad and Tobago were significantly higher than costs to these other islands). Nevertheless, tourism is a substantial dollar earner, with a potentially profound multiplier effect. The country's location necessitated, all the more, an early start in the promotion of the industry. As it turned out, when a substantial flow of tourists from North America began towards the end of the 1950's, Trinidad and Tobago was so ill-equipped that it could not compete. In fact, the country could not adequately accommodate its current volume of visitors. By 1958, it had the additional disadvantage of entering the tourist market late.

The promotion of fisheries continued to be controversial issue in the Government. Nevertheless, Peru provides a classic example of what can be done with such an industry. Following an intensive development project, that country increased its fishing output from 30 metric tons to 5,200 metric tons (1947-61).²⁵ (The significant point here is the scale of the increase.) The population of Trinidad and Tobago consumed as much fish per head as was consumed in the U.K. Of consumption, half of the needs were imported, and demand always well exceeded supply, especially in the rural districts.²⁶ The local catch could have been increased at least ten-fold, and the excess production could have been used to make by-products, such as fish meal for livestock, cat and dog food, cod liver oil, and leather substitutes. These would create more

import substitutes. Indeed, Japanese trawlers have found it beneficial in recent years to lease sites to fish on the east banks off Trinidad (the most productive fishing ground in the vicinity - see discussion in Chapter III). They sell a part of their catch in Trinidad, before returning to Japan with the remainder.

Trade: The country's great and expanding dependence upon trade underlined the necessity for it to diversify its export component. Britain's non-participation in the European Economic Community meant a reduction in the export market as of 1958, when the EEC was formed. Hitherto, Trinidad and Tobago had had a favourable balance of trade with the O.E.E.C. countries, exporting mainly tropical primary products. The new agreements were to favour the French and Dutch colonies in the West Indies over British colonies. Table 4.13 below shows Trinidad and Tobago's balance of payments with other monetary groups. These statistics could also serve to indicate the direction of trade now to be discussed.

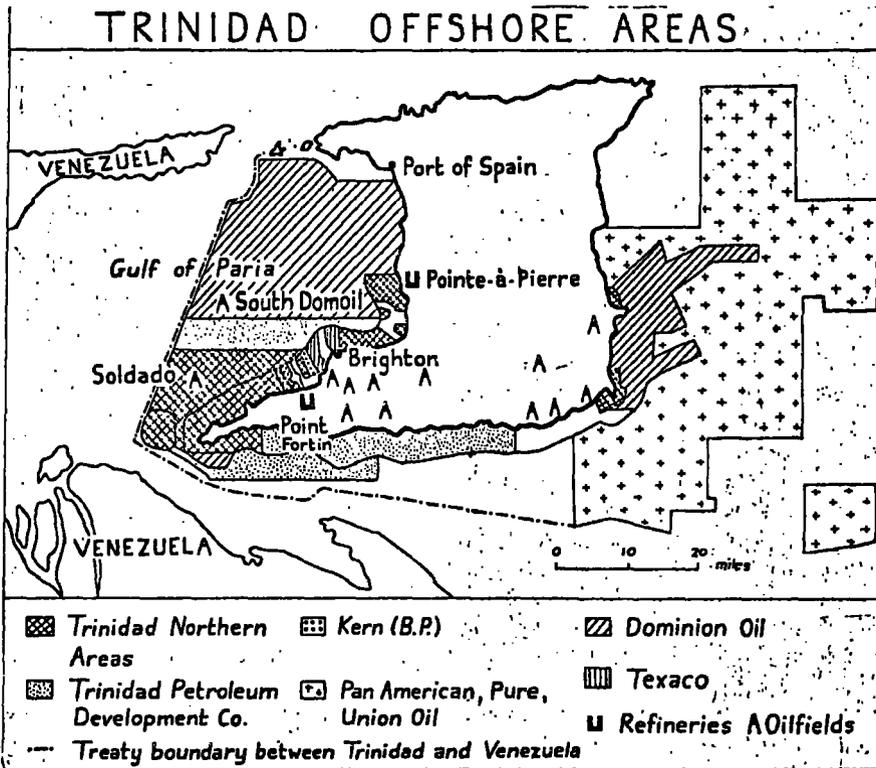
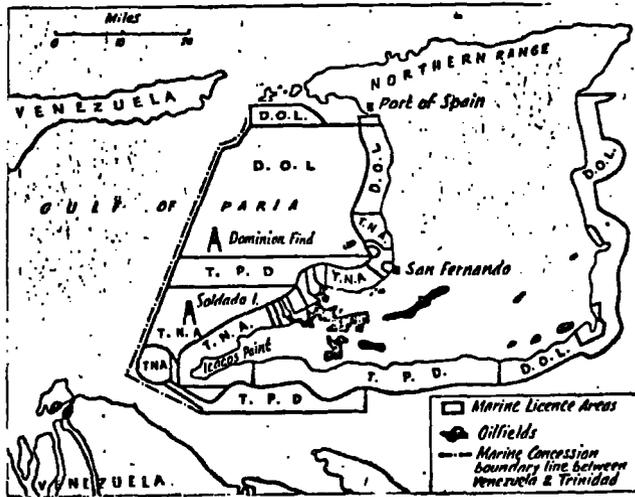
Petroleum products and crude oil dominated the exports and imports respectively. Most of the imports from South America were from Venezuela and Colombia (crude oil). Exports to the U.S. increased sharply in 1958 from \$26.4Mn (7%) the previous year to \$82.3Mn (19%). The value of petroleum products exported to the U.S.

was over 75% of these exports (\$19.7Mn in 1957 and \$72.2Mn in 1958), and most of the increase was due to the expansion of refinery throughput by the Texas Co. (Texaco).²⁷ Marine drilling in the Gulf of Paria had figured significantly in the decisions of both Texaco and Shell (Point Fortin) to expand, as they jointly discovered the first marine deposits. Although the cost of marine drilling is as much as five times greater than the already-expensive onshore drilling, the discovery came as a boost to the entire industry which had produced only one significant discovery since the War. Map 4.1 illustrates the oil deposits and oilfields, as well as marine lease areas.

Table 4.13

	<u>Current Balance of Payments</u>						\$Mn
	Total	U.K.	other colonies	other sterling	O.E.E.C. countries	dollar area	
1953	-4.7	-12.3	5.9	3.3	25.9	-53.3	25.8
1954	-12.1	-12.1	6.5	5.0	23.5	-66.8	31.8
1955	-40.0	-24.4	15.3	-1.1	34.0	-95.8	32.0
1956	-31.2	-44.5	17.1	3.9	44.3	-94.9	42.9
1957	-57.3	-94.0	24.2	-3.8	74.3	-107.6	49.7

Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port of Spain, Government Printery, 1958. p.82.



Map 4.1: Off-shore Oil Drilling Areas
 Source: Petroleum Press Service (1960, 1963)

Despite the vast expansion in exports to the U.S., in 1958, (\$55.9Mn), the entire domestic export value increased by only \$32.7Mn. Exports to some other countries declined, such as the U.K. by \$21.6Mn and Sweden by \$8.3Mn. Trade with the rest of the British Caribbean amounted to only 4.6% of the total trade between 1952 and 1957 (see table 4.13). Consequently, the country was faced with having to extend its overseas market, and hoped to increase its volume of trade with the other islands of the forthcoming West Indies Federation.

Labour and Employment: The rapid expansion of the oil industry and its high productivity standards have made it possible for the industry to offer to its employees considerably higher wages than those offered by most other industries (the chief exceptions in recent years being the government and construction). In the 1950's this factor had two significant adverse effects on the other industries. (1) Early in the decade, the rapid increase in the capital spent on drilling was accompanied by the expansion of the labour force. This resulted in the attraction of manpower from other industries, chiefly the adjacent sugar companies. (2) The more far-reaching factor was the high wage-scale in the oil industry which set new wage standards. Generally speaking, labour union action against manufacturing and other industries for higher wages prior

to 1958 had already caused the production costs and export prices to be too high. The worst of repercussions were to come still later, as certain firms laid off workers in retaliation against higher wage demands, in the early 1960's.

Table 4.14

Government Revenue and Expenditure

	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>
Current Revenue	66.9	72.8	79.1	87.6	100.7
Current Expenditure	<u>57.8</u>	<u>67.8</u>	<u>67.9</u>	<u>75.2</u>	<u>79.7</u>
Current Balance	9.1	5.0	11.2	12.4	21.0
Capital Expenditure	12.0	16.2	19.5	20.9	21.2
Overall Balance	-2.9	-11.2	-8.3	-8.5	-0.2

Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port-of-Spain (Government Printery), 1958, p. 93.

More positive influences by the oil industry on employment are numerous, however. In spite of its capital-intensive nature, the dollars spent by the oil industry employ a large number of people throughout the economy. In 1957, 44.1% of current government revenue was donated by the petroleum industry. Government current expenditure was 79.1% of current revenue (see table 4.14), and virtually all of this expenditure was on wages and salaries.²⁸

Thus, oil-originated revenue paid 34.8% of government wages and salaries.

There is little doubt that many towns and villages in southern Trinidad owe their commercial prosperity to the proximity of adjacent oilfields. Housing schemes sponsored by the oil companies brought impetus to the construction industry. The overall influence of the petroleum industry in the private sector is difficult to measure, and the task is beyond the scope of this thesis. Nevertheless, the industry did support the economy and was most responsible for the relative prosperity of the country which in turn made possible the planning and financing of the First Five-Year Development Programme.

FOOTNOTE TO CHAPTER IV

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5. Rampersad, Frank: Growth and Structural Change in the Economy of Trinidad and Tobago, 1951-61. (Mona, Jamaica, Institute of Social and Economic Research, 1962), p.54.
6. Ibid., p.38

7. Ibid., p.61.
8. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958), p.76.
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20. Ibid., p.129.

21. Petroleum Press Service, vol. 23, no. 12, p. 441.
22. Champion, op. cit., p.562.
23. Ibid, p. 562.
24. Petroleum Association of Trinidad: Trinidad's Oil. (London, Curwen Press, 1952), p.63.
25. United Nations Food and Agriculture Organization: Possibilities of Increasing World Food Production. (Rome, 1963), pp.189, 195.
26. Trinidad and Tobago. Department of Fisheries: Administrative Report, 1957. (Port-of-Spain, Government Printery, 1957).
27. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958), pp. 14-15
28. Ibid., p.79.

CHAPTER V

THE DEVELOPMENT PROGRAMME

It should be indicated here that the First Five-Year Development Programme of Trinidad and Tobago was not the first organised effort by a Government of the territory to improve its economic resources. There had been two "economic programmes" set forth for 1951-55 and for 1956-60 by the Government in office in the 1950's. The Second Economic Programme was replaced by the Development Programme of 1958 to 1962.¹ In the 1956 general elections, the People's National Movement (P.N.M.) replaced the Party of the Political Progress Group (P.P.G.). Thus, following election pledges, the P.N.M. established committees to study the different aspects of the socio-economic nature of the state, and out of these studies grew the Development Programme.* Table 5.1 below is a rough comparison of the first three programmes.

Government revenue may be used as a yardstick for the measurement of the different amounts proposed for the programmes. Such a comparative measurement cannot, however, be wholly valid, since there were no recorded estimates of Government revenue in advance

*Parts of the Economic Programme (1956-60) were implemented prior to 1958. Moreover, the Development Programme of 1958-62 seems to have been drawn up largely on the pattern of the former.

Table 5.1

Former Economic Programmes

(value in \$Mn)

Programmes	Total	Primary sector drainage irri- gation & reclamation	Industry mining & tourism	Electric power	Transport & communi- cation	Social	Public build- ing
1951-55 (actual programme) (% of total)	47.9 6.8%	3.3	nil.	16.0 33.3%	10.1 20.9%	18.0 37.7%	0.6 1.3%
1956-60 (proposed) (% of total)	99.1	2.9 2.9%	nil	20.0 20.2%	29.5 29.8%	40.8 41.2%	5.8 5.9%
1958-62 (original) (% of total)	191.4	12.1 6.3%	18.3 9.6%	26.1 13.7%	55.0 28.7%	68.0 35.5%	11.9 6.2%

Source: Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port-of-Spain (Government Printery), 1958. p. 89.

of each five-year period planned for.

The \$47.9Mn spent in the first Economic Programme was 13.9% of the actual total revenue for 1951-55 of \$345.0Mn and was 98.5% of the accumulated current account surplus (\$48.7Mn). The proposed budget for the Second Economic Programme was \$99.1Mn - 14.1% of the total actual Government revenue for that period (\$702.8Mn) and 76.1% of the actual account surplus. In contrast, the original budget for the Development Programme was 26.1% of the actual Government revenue for 1958-62, (\$191.4Mn/\$734.1Mn), and well in excess of the revenue surplus of \$127.3Mn. Actual expenditure for the Development Programme was \$218.5Mn.² Financing will be discussed later in the chapter.

At the time of drafting, the Programme could contain only a vague allowance for the part the territory would play in the West Indies Federation. The planners, however, were aware that the impact of federal status in the West Indies could not realistically be ignored. Consequently, token allowances were made throughout.*

Having failed to obtain the assistance of the Inter-

*The Federal Capital was to be located in Trinidad, but the Capital city had not yet been decided upon. This meant that Port-of-Spain was to serve as a temporary site, and that the Trinidad and Tobago Government was to provide buildings for office space, among other things.

national Bank for Reconstruction and Development (IBRD) in drawing up the Programme, the Government organised a number of ad hoc committees and commissions to survey various sectors of the economy.

The survey produced these reports:

- Development Plan for Tobago
- Development Plan for the Eastern Counties
- Interim Development Programme for the Sugar Areas (implemented)
- Interim Development Programme for Laventille (implemented)
- Operations of the Marketing Board
- Operations of the Cocoa Pool
- Pioneer Industries Programme
- Social and Economic Impact of Federation on Trinidad Society
- Local Loan-for-Development-Purposes
- Government Hospitals and Health Facilities
- Road Passenger Transport
- General Education
- Role of Government as a Consumer
- Breakdown of the Coastal Steamer Service to Tobago.³

Professor W. Arthur Lewis, then a professor at the University of Manchester, and Mr. Teodoro Moscoso of the Economic Development Administration of Puerto Rico were invited to advise on the draft of the Programme.

The Programme had three basic goals toward which the projects in the various sectors were directed: increased employment, all-round improvement in productivity, and more amenities for the people.

There were 185,300 employed in 1956, and the labour force was growing at almost 5% per annum. The level of unemployment,

however, was not accurately known.⁴ Over 35,000 additional jobs would be needed to maintain full employment during the Programme. Of these, it was hoped that the oil industry would absorb 4,000, the manufacturing industries - 5,000, tourism - 3,000 and the primary sector - 5,000. Additional employment in the public sector was expected to be small during this period. Full employment could not, therefore, be expected, since the service sector, already containing a high percentage of underemployment, would be left to absorb most of the remaining 17,000 persons.

Throughout the economy, higher productivity would be sought through the discovery and application of new techniques and methods of production, as well as through more investment.⁵ Both labour production and productivity were lowest in the primary sector toward the late 1950's. This situation had been indirectly caused by increased unemployment in the urban centres which limited the former trend of rural-urban migration that had been such a common pattern of the early 1950's. Immediate attention to the situation accordingly was justified, although the issue was later clouded by the conflict between welfare and production economics. This is a topic for deeper discussion in Chapter VII.

When the P.N.M. assumed office in 1956, the health standards were quite high for a developing country. The housing standards, however, were critically low, especially in crowded

urban areas, where slum conditions were often deplorable. Similar conditions existed in some rural settlements, where large families sometimes outgrew their dwellings. The Programme made allowances for improved health, housing and educational facilities, as well as for other domestic benefits.

FINANCING THE DEVELOPMENT PROGRAMME

The cost of the Development Programme was first estimated at \$191,388,364, of which about \$44Mn was to be spent in 1958. That year the expenditure of the Programme was to be 6.5% of the GNP (at current prices), but was expected to increase to about 8% by 1962. The average for five years would then be about 7%, which was comparatively lower than the averages of Ghana and New Zealand with over 8% and Ceylon - 7.5%.⁶ Table 5.2 below outlines the origin of funds for the Programme.

In financing the Programme, the Government was to rely mostly on taxes, on different government revenue surplus funds, and, to a limited extent, on domestic loans. No foreign loans had been foreseen. In fact, the aim was to finance the Programme, as far as possible, from current budgetary surpluses.

Steps would be taken to cut down income tax evasion which was, at that time, "at a scandalous level",⁷ to increase taxation to a limited extent on certain important commodities, and to reform

Table 5.2

<u>Revenue and Expenditure of Development Programme</u>	\$Mn
Surplus for 5 years at existing rates of taxes (including estimated share of earnings of Hilton Hotel)	85.8
Yield of new taxation for five years	<u>54.6</u>
	140.4
Less increase in ordinary expenditures	26.3
Less new recurring expenditure for the Development Programme	<u>12.8</u>
	(a) 101.3
Unexpected balances of loan funds Ordinance 41 of 1946 and 11 of 1951	3.5
Unexpected balance of Colonial Development and Welfare grants for capital works	3.6
Balance of Economic Programme funds	4.5
Balance of Alcoholic Beverages special tax for housing fund	0.4
Balance in hand of Planning and Housing Commission	0.7
Coastal Steamers Renewal Fund	<u>0.6</u>
	13.3
Savings of Public Utilities (Electricity depreciation funds)	2.6
Estimated receipts of statute-barred unclaimed gambling monies ...	0.8
Short-term loans from local banks already negotiated. -	
	for Hilton Hotel . 4.5
	for Agricultural Bank
	<u>1.8</u>
	(b) 23.0
Net available from revenue	101.3
Net available from other above	23.0
Surplus on 1957 working	8.5
Other local loans	<u>8.0</u>
	Total available 140.8
	Uncovered balance <u>50.6</u>
	191.4

Source: Trinidad and Tobago Government: First Five-Year Development Programme (1958-62). Port-of-Spain (Government Printery), 1958. p. 49.

legislation pertaining to taxes coming from oil concerns. It was expected that such steps would increase taxes to be collected at the current rate by 63.6% (from \$85.8Mn to \$140.4Mn). To decrease income tax evasion, the Government was to invoke a "pay-as-you-earn" policy, complete with a fully mechanised system for handling assessments. Changes in oil industry legislation planned (1) to enforce a minimum 50/50 division of profits, (2) a progressive tax system for unexploited areas, to encourage rapid exploitation, (3) that half of the already exploited areas should be surrendered to the state, and (4) that competitive bidding would determine the owners of new leases.⁸

The Government issued "premium bonds" and launched a savings drive associated with the Programme. From this source \$8Mn was expected to become available during the five years. Such funds did not include the \$4.5Mn from Barclays Bank for the Hilton Hotel or \$1.8Mn for the Agricultural Bank (see table 5.2). The "estimated share of earnings of Hilton Hotel," included in the first line of the table, was one of six major (partly or wholly) self-liquidating projects:

	\$Mn
Hotel investments.....	11.00
Port Extensions.....	7.00
Ships.....	3.50
Electricity.....	26.00
Rental/mortgage & aided self-help housing.....	6.20
Loans through the Agricultural Bank.....	<u>1.75</u>
Total.....	55.45

By adding revenue expected to accrue from investments in factories, public buildings, housing, market places, reclamation and water works and the airport, the above total would be about \$60Mn.⁹ The uncovered balance of \$50.6Mn had not yet been committed, primarily pending Government-oil company negotiations, the details of which were confidential and unpublished.

The expenditure by principal components was planned as shown in table 5.3.

The redefinition of the status of Tobago was a significant landmark in the history of Trinidad and Tobago. Hitherto, the smaller island had been referred to as The Island-Ward, and treated administratively as "one of the eight counties and . . . shared rather less than equally in the centrally administered services,"¹⁰ because of its distance and the resulting difficulties of communication. It is an island with a separate identity growing out of a historical experience which stands in distinct contrast to that of Trinidad (see Chapter II). In the emerging West Indies Federation the Government wished to present Tobago, therefore, as a "partner with Trinidad rather than . . . a satellite".¹¹ Consequently, special projects had to be drawn up, although they were a part of the complete Programme. The funds allocated for these projects could be examined in table 5.4.

Table 5.3

Components of Development Programme

	Capital Provision (1958-62)	% of Total	Capital Expend. (1958)	Maximum Recurrent	Recur. 1958.
Agriculture	7,710,000	4.0%	1.70 Mn	0.63 Mn	0.30 Mn
Forests	65,000	neg.	0.06	0.12	0.04
Fisheries	1,710,000	0.9	0.31	0.10	0.05
Industry	6,000,000	3.1	0.50	---	---
Tourism	12,273,000	6.4	1.75	---	---
Roads and Bridges	32,046,814	16.8	8.21	0.20	---
Harbours and Ports	7,186,000	3.8	0.95	---	---
Coastal Steamers	3,600,000	1.9	---	---	---
Aviation	2,885,000	1.5	0.86	---	---
Electricity	26,130,400	13.7	5.50	---	---
Drainage and Reclamation	2,294,036	1.2	1.03	---	---
Public Buildings and Amenities	13,009,777	6.8	3.55	---	---
Education	12,742,229	6.7	3.40	2.17	0.39
Health	8,615,457	2.6	1.94	0.60	0.23
Water	21,800,000	11.4	8.11	---	---
Housing	12,169,959	6.3	2.74	---	---
Local Government	19,144,692	10.0	2.94	---	---
Labour and Social Services ..	2,006,000	1.1	0.46	0.09	---
Total	191,388,346	100.0%	44.01 Mn	3.91 Mn	1.01 Mn

Source: Trinidad and Tobago Government: First Five-Year Development Programme (1958-62).
Port-of-Spain (Government Printery), 1958. p. 5.

Table 5.4

Funds Allotted to Tobago's Development

	Capital Provision (1958-62)	Capital Expend. 1958	Recurrent 1958
Agriculture	825,450	108,175	76,630
Forestry	22,000	16,000	5,366
Fisheries	100,000	---	2,492
Industry	10,000	10,000	---
Tourism	100,000	---	---
Water	445,000	180,000	---
Electricity	1,500,000	250,000	---
Roads & Bridges	4,500,000	1,150,000	---
Aviation	260,000	130,000	---
Shipping service with Trinidad.	3,600,000	---	---
Education	650,500	201,500	7,930
Health	109,294	69,294	---
Housing	522,500	22,500	---
Labour & Social Services	13,500	13,500	---
Local Government	377,882	60,147	---
Public Buildings & Amenities . .	109,800	109,800	---
Total	13,145,926	2,320,916	92,418

Source: Trinidad and Tobago Government: First Five-Year Development Programme (1958-62). Port-of-Spain (Government Printery), 1958. p. 111.

THE PLAN IN DETAIL

The projects contained in the Development Programme may be categorised as follows:

(i) Those which generate economic activity by developing the "Basic Industries", which would, in turn, lead the economy towards self-sustained growth.

(ii) Those which provide improved services necessary for industrial expansion, as well as creating a higher standard of living among the people.

(iii) Those which placed a greater emphasis on increased welfare and amenities for the general public, and

(iv) Those which would provide for education and training, as well as employment services, to channel more human resources towards increased productivity in the economy.

There was a great deal of overlapping by many projects, and the survey of the Programme which follows will attempt to indicate the important links between certain projects.

(i) Basic Industries: These include the primary industries (agriculture, forestry and fisheries), manufacturing industries and tourism; and in this group 14.4% of the Programme funds were to be spent.

Agriculture: Dissatisfied with the low productivity in the primary sector where 26.0% of the labour force provided about 13.5% of the GDP in 1957 (current prices), the Government installed an Economic Branch to survey economic investment in this field. There was much room for improvement in crop yields, especially in sugar and cocoa. Moreover, sugar exports were somewhat protected by the Commonwealth Sugar Agreement. Cocoa and coffee prices had been favourable on the world market. Bananas had a guaranteed market at "acceptable" prices, and local demand for agricultural products was expanding faster than supply. Nevertheless, international export trade conditions could not be expected to be so favourably protected indefinitely.

In view of expanding local market possibilities, therefore, the Economic Branch was investigating the wisdom of economic investment in marketing and management as a step to keeping the agricultural population on the land at a more productive level. This would improve their standard of living to compare more favourably with that of employees in other industries.

An Extension Service was established to carry out widespread research in (1) disease prevention, (2) hybridisation, (3) more intensive use of available agricultural land and (4) increased soil conservation, especially on slopes. In addition, (5) there were plant propagation schemes set up to provide

seedlings and young plants to new and old farmers alike, as subsidies.

Disease prevention and hybridisation efforts were often closely connected, as the latter was sometimes used as a step towards ensuring the former. Much research went into the breeding of cattle, pigs and poultry, as well as investigation into methods to control crop disease, such as the red-ring disease in coconuts and a rootstock virus in citrus crops.

The drive toward more efficient land use prompted the establishment of seed gardens at the Central Experimental Station, with estimated yields of 400 coffee seedlings per acre annually using 500 acres. Research was also directed to the development of new rubber plantations. Promotion of contour cultivation on hill slopes was another of the efforts of the Extension Service in soil conservation, while a large land reclamation scheme (3% of the agricultural funds), under the recommendation of the FAO, was proposed for the Oropouche Lagoon to provide additional land for rice and other food crops.

Extension Service stations were established in many districts, and their staffs included agricultural officers who provided audio-visual aids and artificial insemination services. By offering subsidies for the construction of wells and small reservoirs, farmers were encouraged to supply their livestock with

sufficient water.

The Agricultural Credit Bank was to be authorised to increase its loan capital by \$1,250,000, by borrowing from commercial banks at 4½% interest. \$500,000 would then be loaned to agricultural credit societies on a short-term basis, while medium-term loans would be made available for the purchase of livestock or to add to other forms of agricultural capital. Both short-term and medium-term loans would be at a lower rate of interest than those of commercial banks.

Re-organisation of the Marketing Board was planned to improve service to the public and local producers alike. Several minor markets were to be constructed in new sites such as Charlotteville and Scarborough. A re-organised agency would be further engaged in developing, grading, sorting and pre-packing food. The wholesale market to be erected near Port-of-Spain was thus sited to avoid the congestion of the Eastern Market in the city. It would be larger, with greatly extended facilities for cool and cold storage.

Forestry: Some 45% of the territory's land was forested, of which, in 1958, over 95% was Crown Land. According to the official forest policy, certain stands were to remain virgin forests for the preservation of the wild life sanctuaries, the regulation of the ground water supply, and against soil erosion.

A scheme was set forth, accordingly, to encourage private owners of unused land to lease such holdings to the Government for a prescribed time, during which afforestation would be implemented. Previous forest fires and other destruction to Crown Land had also warranted afforestation measures.

Timber production, a major concern of the Forestry Department, needed to be increased, since present output met only two-thirds of the local demand. Moreover, the existence of the new West Indies Federation was expected to expand the market further. To achieve this, subsidies were offered to private owners to grow plantations of teak or pine. A Honduran Pine nursery was installed, forest stations were set up, and officers were employed to destroy undesirable species, replacing them with valuable alternatives.¹² In addition, access roads were being opened into the forest areas to facilitate log transportation.

Rural industries, such as charcoal and firewood production, were to be encouraged, since there was a continued local demand for these products.

Fisheries: \$1.7Mn was allocated to the Fisheries Department, of which \$500,000 was to be spent building a new fish market at Sea Lots (eastern Port-of-Spain). There was some doubt as to whether it would be completed by 1962, but 10% of the cost was to be spent in 1958. The responsibility of the market was passed on

to a Government agency which was to pioneer the use of insulated and hygienic containers by door-to-door venders. The market would have its own landing and storage facilities.

The fishing vessels then in use were too small and ill-equipped for large-scale fishing (see discussion on fishing in Chapters III and IV), and ideal equipment and other facilities were beyond the financial means of the local fisherman. Accordingly, the Fisheries Department had been granted funds to purchase a large and well-equipped vessel for "exploratory and demonstration fishing".¹³ Loans were also made available to fishermen through appropriate funds from the Agricultural Credit Bank, thus increasing the capacity of the Bank by \$160,000 in 1958, and \$0.5Mn over the five years of the Programme.

Manufacturing: In 1956, almost 10% of the labour force was employed in manufacturing industries, and this sector was thought to be most capable of expanding sufficiently to absorb a significant increase in employment. The Government's proposals to develop public services such as public utilities, roads, water and land sites, would provide services for, and utilise products of the manufacturing industries. A sum of \$6Mn was allocated to the Industrial Development Corporation (I.D.C.), which was created with the necessary authority to establish and develop new industries. Some \$0.5Mn was to be spent in 1958, a major part of which

would supply industrial sites and construct factories for lease to private firms. Under ministerial control, the I.D.C. was to keep a close check on such matters as town planning, factory welfare and trade unions. Owing to a shortage of trained personnel, however, the early progress of the Corporation was expected to be slow.

Tourism: The Hotel Development Corporation was created in 1956 to promote increased hotel accommodation. Prior to 1958, its activities had been limited to the expansion of existing hotels. The Programme went a step further: it planned to spend \$9.5Mn to construct a new luxury hotel to be leased to an international firm who would run it on a profit-sharing basis. The Government was to provide \$5Mn, while \$4.5Mn would be obtained from a local bank at 6% interest. Hilton Hotels International won the contract - a 20-year lease, the Government receiving "as annual rent two-thirds of the gross operating profit".¹⁴ Any gross operating losses would not be carried forward, and would be on the operator's account. Construction was to commence in 1958, with the hope that the hotel would be completed by 1961.

In addition to this major project, the Tourist Board was authorised to publish the attractiveness of Trinidad and Tobago as a tourist resort, to assist private enterprise in providing restaurants, recreational and changing facilities at beaches, to

develop scenic landmarks and historic sites, and to complete a registry of all the guest houses and hotels in the territory. The Programme offered loans to aid proprietors in constructing small hotels, especially near beaches.

(ii) The Infra-Structure: The second part of the Development Programme is entitled "Service Industries and Investment in Public Services." Most of its components provided services which were biased toward developing the basic industries. This group of projects was to spend \$95.9Mn, 50.1% of the Programme funds.

Water: The supply and distribution of water had become a crucial problem in the areas of Trinidad and Tobago being rapidly urbanised. Numerous rural settlements lacked an adequate supply of pipe-borne water, while others had no such source of water at all. Separate authorities were responsible for different distribution schemes throughout the country, but their efforts were not well co-ordinated and the growing demand made appropriate policy changes necessary.

In 1958, the Central Water Distribution Authority (C.W.D.A.) supplied most of the rural areas. In theory, it bought water from the Works and Hydraulics Department (W.H.D.) for distribution at two-thirds the cost of winning the water. Port-of-Spain, San Fernando and Arima also purchased their water independently from the W.H.D.

Water rates would vary, but revenue just about balanced expenditure each year. In the case of Port-of-Spain, the City Council bought only a part of its water from the W.H.D., since it had a complementary distribution system of its own.

Water rates tended to be higher for large consumers in the business sector, on account of the rates policy. Where the C.W.D.A. had not installed metres, the local residents who used a public source paid 7½% of the rateable value of their property in water rates. For metred consumers, as well as for larger users, the charges were higher.¹⁵ The cost of distribution was exceedingly high, and in some remote districts costs of about \$1,000 per head had been incurred! Consequently, one of the main efforts of the Programme was to decentralise the catchment centres, and, in so doing, to create a more highly productive system at a lower cost. Temporary arrangements were made to deliver truck-borne water to rural areas where supplies of safe drinking water were scarce. Many such areas used well-water and other untreated sources of questionable hygienic standards.

In north-west Trinidad, around Port-of-Spain, the ground water supply was in danger of being contaminated by a defective sewerage system. Accordingly, as a part of the Health and Sanitation projects, a sewerage scheme was planned (see later in chapter). Table 5.5 below outlines the water scheme which proposed

to increase the daily production from 22Mn to 35Mn gallons. The figures exclude supplies from the Port-of-Spain City Council.

Drainage and Reclamation: The largest of these projects was the Oropouche Lagoon scheme aimed at reclaiming much of the swamp land southwest of San Fernando for agriculture. Funds for this project were allocated to Agriculture (see section on Agriculture above). The Laventille Swamp drainage and reclamation schemes were next in importance. They consisted of (i) draining a part of the Laventille Swamp, whose presence created a health hazard to the residents on the nearby Eastern Main Road (see fig. 5.1), (ii) reclamation of a large area south of the railway tracks, which would later be used as an industrial estate and/or residential settlements. The immediate aim was, however, to open the new Laventille Swamp Road (later re-named the Beetham Highway - see Appendix III) to relieve traffic congestion on the Eastern Main Road between Port-of-Spain and Barataria.

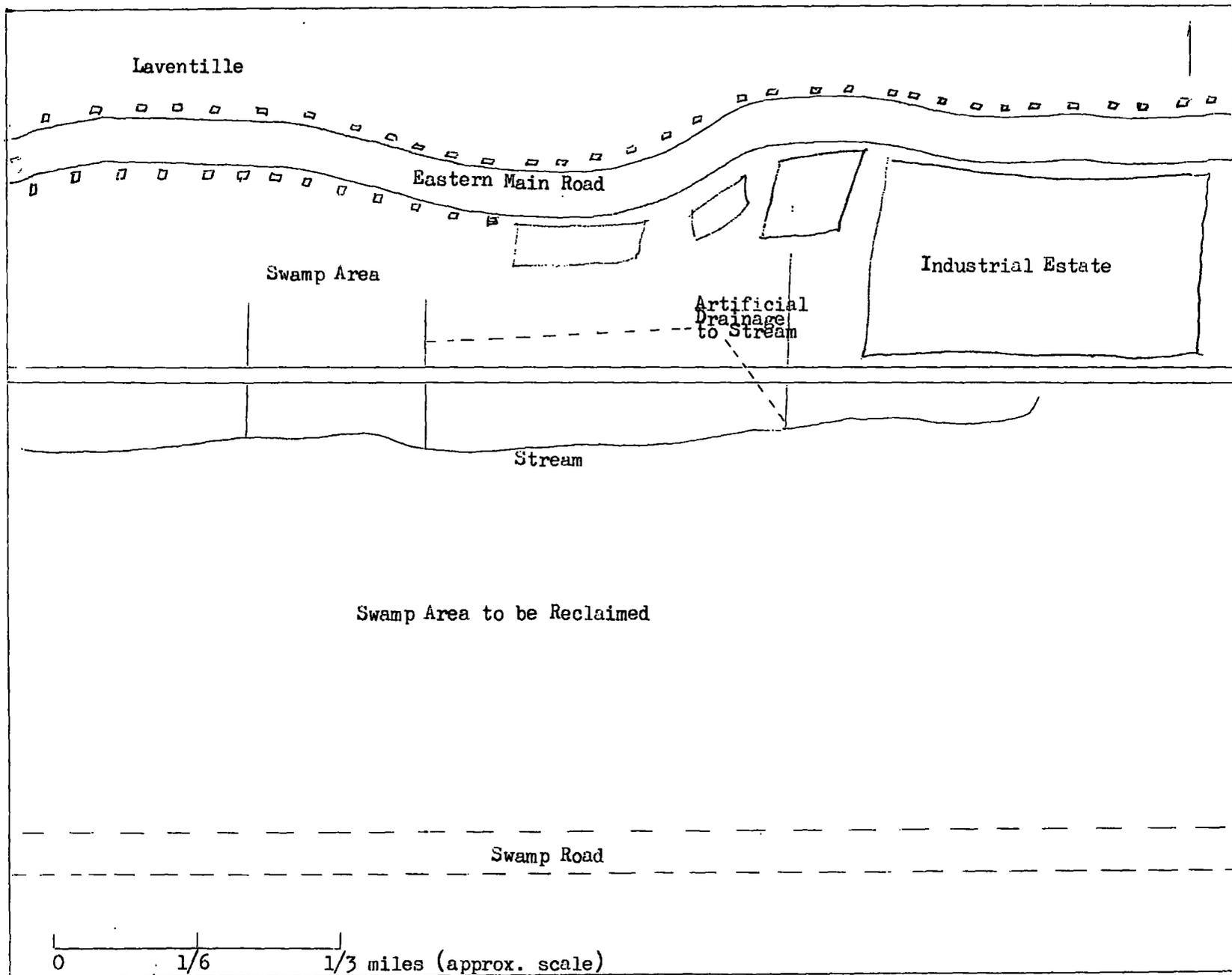
The Maraval River, flowing through Port-of-Spain on the west side, is a gentle stream during the dry season, but a roaring torrent for much of the rainy season, causing critical erosion along its banks. The Government accordingly had proposed to pave and wall the stream and divert the last 700 feet of its course away from the Mucurapo Lands, then being prepared for a housing development.

Table 5.5

<u>Water Scheme</u>		'000 galls./day
	Developed potential	Estimated usage (1962)
Navet	12,000	6,000
Valsayn Boreholes	6,000	5,000
Hollis Reservoir	5,500	5,500
Carlsen Field and Chimborazo Schemes	2,000	1,750
Diego Martin	2,000	1,500
Wharf and Docksite Boreholes	2,000	2,000
Penal Boreholes	1,000	800
Point Fortin - Granville Boreholes	1,000	700
Waller Field	1,000	500
Tobago	1,250	750
Miscellaneous rural sources	500	500
	<u>34,250</u>	<u>25,000</u>

Source: Trinidad and Tobago Government: First Five-Year Development Programme (1958-62). Port-of-Spain (Government Printery), 1958. p. 18.

Figure 5.1 - Laventille Swamp (diagrammatic).



A project in the Diego Martin basin was supposed to control seasonal floods by strengthening the bank in places and clearing obstructions along the course of the river. Residential areas in Diego Martin were often subject to flood damage.

Along the Caroni River, flood control measures were expected to reduce the damage done to crops and property, which was often quite serious.

Transport and Communication: In this section we will survey transport and communication facilities at two levels: (a) local and (b) international. Projects at these two levels were to accumulate a total expenditure of \$45.7Mn (23.8% of the Programme's funds).

(a) All thirteen local projects were related to road traffic improvement (see also Appendix III):

- (1) construction of the Laventille Swamp Road,
- (2) construction of the Lady Young Road,
- (3, 4, & 5) short extensions of the South Trunk Road at different points,
- (6, 7, 8, & 9) extensions on other roads,
- (10) replacement of a bridge,
- (11) "miscellaneous improvements" - mostly road maintenance and extensions by county councils,
- (12) car parks and traffic controls,
- (13) additional staff for the Works and Hydraulics Department.¹⁶

Before discussing the importance of these projects, it should be pointed out that many of the electricity projects are related to

local transportation and communication. Similarly, local government projects, such as street lights, and public building projects, such as the postal services, fall into this category. These will be treated in detail later.

The list of local road projects, though small, represented the highest share of funds (16.8%) allocated for the Programme (see table 5.3). The Works and Hydraulics Department was responsible for the projects. There was growing traffic congestion in and near urban areas, accompanied by a rise in traffic accidents. The latter, being of considerable concern to the Government, led to more stringent road regulations.*

Sea communications between Trinidad and Tobago needed urgent attention. Two Government coastal steamers had been in operation previously, but, due to unsatisfactory organisation, the service had been inadequate. Furthermore, the two old vessels had been condemned. The Government accordingly arranged to build two modern ships with capacity for 250 passengers each, and they were to be in operation between Scarborough and Port-of-Spain by mid-1959.

(b) Many remedial and improvement projects were needed for different aspects of external communication, the largest share going to aviation and being concentrated on the Piarco Air Terminal.

*This statement is reminiscent of popular misconceptions about road fatalities (see discussion in Appendix I to Chapter II).

Aviation: Although the number of aircrafts using the airport had declined from 11,722 in 1949 to 9,909 in 1957, the passengers handled (excluding personnel travelling in official capacity and the military) increased from approximately 118,000 to 157,300 within that period. Aircrafts using the terminal were larger, and the terminal building had become too small despite temporary extensions. Moreover, the building was too close to the runway and was becoming a hazard to the increasingly-larger aircrafts. Being a wooden structure it required greater maintenance. Air traffic was expected to increase at an even faster rate, in the wake both of the added emphasis on tourism and the location of Trinidad as the site of the Federal capital. Thus, a new air terminal building was essential.

A new runway lighting system had been installed in 1951 to improve the night landing facilities, but its installation was faulty, and, in the last few years leading up to the Programme, it had been in constant need of repair. The system, therefore, had to be replaced.

The runway had been constructed in anticipation of 30,000 lb. to 40,000 lb. aeroplanes, but the new aircrafts were five times as heavy, and exerting more than three times the pressure per square inch on the runway. Consequently, plans were made to strengthen the surface and improve its drainage.

In Tobago, Crown Point Airport was also to be improved. It then was used only during daylight hours; the runway was unpaved and was subject to periods of disuse during rainy weather. The immediate proposal called for night landing facilities and a method for hardening the runway surface, which would later be paved with asphalt. Long range plans also included the modernisation of the entire airport to correspond more closely to international standards.

Port Facilities at Port-of-Spain were deplorably inadequate to handle the volume of trade available to Trinidad and Tobago. Excluding oil products and crude oil, Port-of-Spain handled the largest share of the territory's imports and exports, but it had only limited capacity to berth and unload vessels (fig. 6.1 shows the extensions to the Port by 1960). Thus, incoming crafts sometimes had to wait three days to unload, which meant that ships often lost money or just broke even when calling at Port-of-Spain. Maximum crane capacity was only 30 tons, and after goods had been unloaded, the storage facilities were severely limited. In 1957 the average tonnage of goods handled was 230 tons per foot, compared with 600 tons per foot for most modern ports.¹⁷

The Programme contained proposals to expand berthing capacity from "six or seven vessels at a time . . . [to] eleven or

more ships".¹⁸ Wharf frontage was to increase from 3,300 ft. to about 5,500 ft. Storage capacity in transit sheds was only 250,000 sq.ft. of floorspace, but long-term plans were made for eventual capacity of 523,000 sq.ft. An addition of only 50,000 sq.ft. would be expected by 1962, however. A new warehouse was to be constructed to provide storage for hazardous cargo, such as paints, ammunition and carbide, which had hitherto been indiscriminately kept with other cargo. Besides these projects, another was planned to dredge the harbour from the current depth of 28 ft. to 32 ft. Another basin west of the harbour was also to be dredged to that depth to bring into operation additional docking facilities.

Electricity: The second largest share of the Programme's funds (13.7% - table 5.3) was committed to electricity, to meet a rapidly growing demand in many sectors of the economy. A great deal of the electricity generated (46%) was owned by the Trinidad and Tobago Electricity Commission (T&TEC). Private firms owned virtually all of the remainder. Of the T&TEC contribution, 57% was used by industry, 14% by commerce and 27% by domestic consumers.

The expected changes in the economic structure of the country during the execution of the Basic Industries projects would need to be accompanied by a rapid increase in the output of electric power. The growth of the industrial sector would create new

consumers, expand the requirements of present consumers, and create a transfer to public power by some firms currently using private sources of power which were likely to become obsolete shortly. For example, between 1953 and 1957 alone, "owing to the expansion of electricity the installed capacity of equipment engaged in driving other motors fell by 31%."¹⁹ Furthermore, indications in 1957 of the upward trend in the standard of living (see Chapter IV, fig. 4.1) pointed to the likelihood of a rapid increase in household consumption. More houses were being wired, and those already wired were having their electricity systems extended. Meanwhile, a rapid increase in the purchase of electric appliances was taking place. Public services such as electric street lights were also to be increased.

In the light of such a growing demand, the T&TEC needed urgent expansion. Its installed capacity was 58 megawatts, but its largest set was 20MW, so, if one set was temporarily out of order, the total safe-capacity was only 38MW. The anticipated annual growth in demand from 1958 to 1962 was as follows: 31.8MW, 41.8MW, 55.0MW, 62.6MW, and 71.6MW respectively. Larger sets were more economical to operate and maintain, but other capital expenditure was also urgently necessary. Consequently, to meet the former demand, a merger was being studied between the Port-of-Spain Corporation Electricity Board and the San Fernando Borough (both of

whom bought power from the T&TEC) with the T&TEC.

The Government authorised a scheme whereby the bulk cost of wiring new houses would be eased by acquiring a guaranteed bank loan for the purpose. In so doing, the new house owner would pay a slightly higher electricity rate each month over a period of five years, to cover the cost of \$60 for wiring.

(iii) The Services to the General Public: This group of projects is characterised by its large quantity of low-cost items. It, however, reflects the widespread need for additions and extensions to already-existing public institutions.

Public Buildings, Amenities and Local Government: Numerous small tasks were assigned at this level, due mainly to a critical shortage of office space for local government and Central Government services. The situation arose from a cessation of building during and immediately following the war, in which time the government service had greatly expanded. Ministerial government had been introduced, politicians had become more deeply committed to public service, and the forthcoming Federal Government's needs had to be anticipated. There were, accordingly, many arrangements to extend existing Government buildings and construct new ones, such as (1) temporary accommodation for Federal Government personnel, while awaiting plans for, and construction of, permanent buildings, (2)

police station extensions in nine districts, (3) new fire stations in five districts, (4) three new post offices and three extensions, and (5) a licensing office in San Fernando to relieve the pressure on the single office in Port-of-Spain, in the light of the growing volume of road traffic (see Appendix I to Chapter II).

For recreational and cultural functions, buildings such as a new sports stadium and two community concert halls (in Port-of-Spain and San Fernando) were planned.

Being the site of the federal capital, appropriate accommodation had to be provided for the Governor-General of the West Indies. The residence of the Governor of Trinidad and Tobago was remodelled for this purpose, the Governor himself being re-housed.

The chores of local government councils included the execution of many of the projects so far mentioned, such as street lighting, road repair and local sanitation routines. Special projects included extensions on the town halls in San Fernando and Arima, while in Port-of-Spain a new one was planned to replace the building that had previously been destroyed by fire.

Housing: Like public housing, private housing was deficient and deplorable. Public funds were available for private loans, but hitherto, this source had been far from adequate. The incidence of lower-income families having to live in sub-standard

housing would invite mass social upheaval in the long run, expanding an already-evident wave of crime in slum areas. Looming over this critical situation was the prospect of a new intensity of immigration of poorer people from the other West Indian islands as soon as the Federation did come into effect.

To encourage private capital to flow into housing, the Government had four main proposals: (a) to purchase and prepare land for sale as building sites; (b) to allow the owner-occupier of any house built after January 1st, 1958, exemption from paying taxes on the rateable value system; (c) moreover, after January 1st, 1958, any such person building a house or a block of flats, each unit of which cost less than \$20,000, would be exempt from paying income tax for ten years after that date;* (d) owner-occupiers were also guaranteed the interest and up to 85% of the principal on money loaned to purchase a house costing \$20,000 or less.

Apart from these measures, the Government was planning its own housing scheme. (1) "The Aided Self-Help Programme" provided Crown Land for the building of houses. The eventual owner would get the building material at cost and contribute the labour

*This applies to rents and to profits made in speculative building for sale (but not to builders' profits as such).

necessary for building under the supervision of a government official. There were 123 such houses already being inaugurated and would be completed in 1958, and 540 were to be ready by 1962.

(2) "Rental Mortgage Housing" was built directly by the Government to meet the needs of the low-to-middle income groups. There were 832 such houses planned for by the Programme, of which 106 were to be completed by 1958.

(3) An "Urban Re-development" scheme promised the building of large blocks of flats for working-class families currently living in slum conditions. As such families of urban workers were unable to participate in the "Aided Self-Help" scheme, these complementary steps were necessary. Their income was too low for the "Rental Mortgage" scheme. Thus, the third plan was adopted for them. The rental system needed to be revised, but would be agreed upon before the blocks of flats were completed.

Health and Sanitation: The population's state of health seemed satisfactory in 1957. The death rate was falling steadily, and reported cases of most infectious diseases were diminishing. Nevertheless, the country had progressed beyond the level of mere curative medicine, and people were considerably more conscious of advanced preventive medicine. Whereas the former has most effect in decreasing the death rate, the demand for the latter reflects the desire for almost-unattainable perfect health and long life.²⁰

This increasing desire for improved personal health made it necessary to expand the overworked, understaffed hospitals and public health facilities. There were 1,984 general hospital beds, along with 1,032 in the Mental Hospital and 737 in the houses of refuge in 1955. Minor cases were treated at 7 health centres and 85 health offices. One of every four school children had access to the public dental service. Private nursing homes were quite effectively distributed around the country to further meet the public demand.

The Programme planned to expand the number of hospital beds by 514, as well as improving other facilities. Health centres and offices would be built in rural areas not currently being served; more modern equipment would be acquired; health education units would endeavour to arouse awareness in rural areas of basic household health and sanitation. The dental service was to be extended into rural areas not previously served.

In conjunction with the Fire Services, the ambulances available to the hospitals and health services were to be increased.

The largest and most complex scheme to be conducted in this department, however, was the sewerage scheme to serve Port-of-Spain and the surrounding areas. As mentioned earlier (discussion on Water), the current system posed a threat to the water supply of the city. Some 70,000 to 80,000 houses were without adequate

sewage facilities. Thus, temporary remedial steps were planned, awaiting appraisal of the situation by the World Health Organisation and UNICEF officials, who later helped to plan an appropriate scheme.

It should be noted here that the extension of pipe-borne water to more rural areas had profound implications for health and sanitation. Such distribution would decrease the use of untreated sources of water referred to earlier in the chapter.

(iv) Education, Training and Employment: These aims of the Programme bring together the demands of the industrial sector and the desires of the working population at the level of transforming productivity standards and educational values. The rapidly increasing demand for education in post-war years had been met only in part by slowly expanding facilities. Nevertheless, educational attainment had been increasingly used as the main criterion for initial employment. With the rapid pace of industrialisation, the emphasis on training had become more widespread and, in recent years, distinctly more specialised. What may be termed an "Educational Revolution" had therefore come into being. In its wake it left many older people with somewhat irrelevant and sometimes inferior training and skill, to compete with younger employees with more modern training. Moreover, the education system, a derivative

of the English system, was highly selective. As a result, given insufficient secondary school places at reputable institutions, many good students were screened out without a means to qualify for a better job.

By 1957, the Government had become aware of the need for more varied avenues of training. A fairly elaborate series of social projects were planned to better meet the local requirements. Village councils were appointed and entrusted with funds to erect local community centres, in which classes in home economics, various handicrafts, cultural programmes and other schemes were to be offered. Adult night classes had hitherto been conducted in local elementary schools. These were to be supplemented by a Polytechnic Institute in Port-of-Spain for more advanced students desiring higher education. Technical institutes were also opened in San Fernando and Port-of-Spain.

There was insufficient accommodation for training teachers. Thus, a central teachers' training college was planned to provide 200 places. In a 2-year programme, 100 teachers would be turned out each year. While this was being constructed, emergency one-year courses for 150 untrained teachers were to commence in 1958.

There were 5,705 new places planned for primary schools, a new experimental central school was to be established, and

expansion was planned among government secondary schools. Much more aid would also be given to secondary school students on merit.

Employment bureaus had been in existence. The Government's effort to increase employment opportunities was expressed, in emphasising projects that improved the general business atmosphere of the country. Thus, the low figure of \$14.7Mn (7.8% of Programme funds - see table 5.3) to be spent on Education, Labour and Social Services is somewhat deceptive if one does not take into account the proposed efforts of the I.D.C. Such efforts were directed at expanding the industrial sector. In addition, the Programme would increase job opportunities by expanding the infrastructure, thus creating a greater capacity for services. There would also be a general increase in government employment as a direct result of the Programme.

Consideration of the nature and viability of the entire Programme will be surveyed after the actual achievements have been discussed.

FOOTNOTES TO CHAPTER V

1. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958), p.88.
2. _____ : Draft Second Five-Year Plan (1964-68). (Port-of-Spain, Government Printery, 1963), p.34.
3. _____ : First Five-Year Development Programme (1958-62), (Port-of-Spain, Government Printery, 1958), pp. 2-3.
4. Ibid., p.3.
5. Ibid., p.4.
6. Ibid., p.5.
7. Ibid., p.48
8. Ibid., p.48.
9. Ibid., p.47.
10. Ibid., p.110.
11. Ibid., p.110.
12. Moore, David: "The Effects of an Expanding Economy on the Tropical Shelterwood System in Trinidad." Journal of the Agricultural Society of Trinidad and Tobago, vol. 58, no.1, 1958. pp. 27-38.
13. Trinidad and Tobago Government: First Five-Year Development Programme (1958-62). (Government Printery, Port-of-Spain, 1958), pp.77.
14. Ibid., p.15.
15. Ibid., p.17.
16. Ibid., p.53.

17. Kingsbury, R.: Commercial Geography of Trinidad and Tobago
Bloomington, Indiana (University of Indiana Press), 1961.
p.22.
18. Trinidad and Tobago Government: First Five-Year Development
Programme (1958-62). (Port-of-Spain, Government Printery,
1958), pp.2-3
19. Trinidad and Tobago Government: Country Report - Manufacture
Sector, 1966. (Official-unpublished) 1966. p.2.
20. Lewis, W. Arthur: Development Planning. (London, Allen & Unwin,
1966), pp. 111-112.

CHAPTER VI
THE ACHIEVEMENTS
OF THE
DEVELOPMENT PROGRAMME

The actual expenditure of the Programme was \$218.5Mn, \$27.1Mn more than the 1958 pledge, but over \$21Mn less than what had been provided for by 1962 (\$240Mn).¹ Table 6.1 compares the draft of 1958 with the actual expenditure. In the original draft, there were 18 components, to which two had been added by 1962 (Special Works Programme and Telephone Service), costing the Government another \$6.7Mn. Nine of the original components received funds in excess of their 1958 estimate, while nine others did not cost the Programme as much as earlier anticipated. The overall increased expenditure was "partly as a result of revisions dictated by changing circumstances and partly as a result of wage increases".²

Owing to rising costs in the Programme, the Government reluctantly obtained funds from foreign sources (\$18.7Mn), of which loans amounted to \$15.7Mn. A further \$91Mn (41.6%) came from current Government revenue surpluses during the period, while other local sources, such as the sale of oil concessions, short-term borrowing and saving by statutory bodies (see Chapter V) totalled

Table 6.1

<u>Actual Expenditure of Development Programme</u>				<u>\$m</u>	
	Pledged expend. (1958)	% of total (1958)	Actual expend. (1962)	% of total (1962)	
Agriculture	7.7	4.0%	4.5	2.1%	
Forests	0.1	neg.	0.1	neg.	
Fisheries	1.7	0.9	0.2	0.1	
Industry	6.0	3.1	3.5	1.6	
Tourism	12.3	6.4	15.3	7.0	
Roads and Bridges	32.0	16.8	23.9	10.9	
Harbours and Ports	7.2	3.8	1.1	0.5	
Coastal Steamers	3.6	1.9	3.4	1.5	
Aviation	2.9	1.5	7.5	3.5	
Electricity	26.1	13.7	38.7	17.8	
Drainage and Reclamation	2.3	1.2	3.0	1.4	
Water	21.8	11.4	27.8	12.7	
Telephone Service	--	--	0.7	0.3	
Public Buildings and Amenities	13.0	6.8	6.0	2.7	
Education	12.7	6.7	13.3	6.1	
Health	8.6	4.5	24.3	11.1	
Housing	12.2	6.3	23.4	10.7	
Local Government	19.1	10.0	13.5	6.2	
Labour and Social Services ...	2.0	1.1	2.3	1.0	
Special Works Programme	--	--	6.0	2.8	
Total	191.4	100.0%	218.5	100.0%	

Source: Trinidad and Tobago Government: Draft, Second Five-Year Plan (1964-68). Port-of-Spain (Government Printery), 1964. p. 34.

\$53Mn - 24.1%. Local loans stood at \$56.5Mn - 25.7% of the cost of the Programme.

In reporting the results of the Programme, it is very difficult to trace the extent to which all projects were carried out, from the scant supply of available reports. Nevertheless, the following paragraphs will account for certain of the changes in the expenditure of various components, briefly outline the accomplishments, and mention certain shortcomings.

ACHIEVEMENTS

Basic Industries:

Agriculture: The Extension Service was strengthened to provide improved planting material and to lay out pastures. More access roads were built; an increased water supply was made available for livestock and irrigation; subsidies were provided for ploughing.

A pilot scheme was commenced to develop small farms at Waller Field, starting with five farms, 20 acres each. As scheduled, the Oropouche Lagoon Drainage Scheme was underway by 1961 and was progressing as expected. The site for the Central Wholesale and Retail Market in Port-of-Spain had only been cleared, drained and fenced, and the superstructure erected thus far. In Trinidad, subsidies had been introduced for coffee production,

controlling of banana leaf-spot disease, forage grass on new land, and mechanised ploughing of cane fields. In Tobago, subsidies were offered for the production of pigeon peas, yams, sweet potatoes and plantains, as well as for construction of pig pens and deep-litter houses.

The Forestry programme accomplished the planned regeneration of specific stands, and the plantations of teak and pine were started. An access road was extended into the Erin Savannah Forest in South Trinidad, but inclement weather prior to 1960 slowed up the pace of similar work in the Northern Range,³ and scheduled completion was delayed.

For Fisheries, beaches were cleared and landing facilities improved in some areas for the more adequate disposal of catches and the storage of fishing equipment. In 1961, following legislative measures, loans were allocated to fishing needs, while in the following year the experimental fishing vessel was launched.

Manufacture and Tourism: The I.D.C. was established in 1958 (see Chapter V) with responsibility for industrial expansion. At a later date, responsibility for hotel development was added. With 345 acres of land at their disposal, the I.D.C. commenced development of industrial sites in 1959 and, by the end of 1963,

\$1.7Mn had been spent preparing 272 acres. This acreage provided 97 completely developed sites, while 41 were not yet fully developed. The prepared sites included Sea Lots and East Dry River (eastern Port-of-Spain), O'Meara (Arima), Plaisance (Pointe-a-Pierre), Tobago and Point Fortin. The largest establishment was Grace Chemical - a fertilizer plant based to a great extent on the abundant supply of "low cost natural gas . . . available close to deep water".⁴ Total investment here was \$30Mn, as the new industry offered great possibilities for assisting economic growth (see Chapter VII below).

Between 1959 and mid-1963, the I.D.C. had "assisted in the establishment or expansion of 47 non-pioneer factories,"⁵ as well as assisting 13 pioneer establishments which were still under construction by mid-1963 and 27 in various stages of being planned.* Investment contemplated by the 47 non-pioneer establishments was \$5.5Mn, employing about 1500 workers both directly and indirectly. The 40 pioneer industries were expected to invest a total of \$173.2Mn and provide direct employment for 2,255 workers. The progress of the I.D.C. was slowed considerably by the late arrival of trained personnel, and it was not until 1962 that a committee

*Both pioneer and non-pioneer industries received some type of import duty concession, but only the pioneer industries were given tax exemptions.

of technical advisors was made available to assist small industries. A loan fund of \$630,000 was also allocated to these small industries.

The Trinidad Hilton Hotel was already completed by 1962 at the cost of \$13Mn, some \$3.5Mn in excess of the amount pledged in 1958. With a view to raising the standard of hotel service in Trinidad and Tobago (the Trinidad public was generally indifferent to foreign visitors),⁶ a Hotel and Catering School was established. Funds were also advanced to several hotels for expansion, remodeling etc. (\$1.2Mn).

The Tourist Board was set up in 1958 to deal with publicity, assistance in preparing beaches and resort facilities, beautifying historical points and other landmarks, and encouraging a higher standard of hotel accommodation. The mere fact that only \$1.5Mn of the \$4.8Mn originally allocated to the Board was used during the Programme reflects, in part, the extent to which the slow start of I.D.C. operation affected such procedures.

The Infra-Structure:

Water: Most of the expansion of water winning and distribution planned by the Works and Hydraulics Department was carried out, and, by 1962, of the 34.25Mn gallons-per-day anticipated flow, production stood at 32Mn gallons-per-day. In Port-of-Spain, the city

capacity was also increased from 5.5Mn gallons-per-day to 9Mn gallons-per-day. The actual cost of projects in this department was \$27.8Mn, an increase of \$6.0Mn over the original pledge, as "many miles of distribution mains were laid."⁷

Drainage and Reclamation: The four major projects undertaken by this department were: (a) fortification of the banks of the Maraval River against seasonal erosion, (b) drainage and reclamation of the Laventille Swamp, (c) widening and deepening of the Caroni River channel from Piarcó to the coast, including the building of flood embankments, and (d) flood control measures in the Diego Martin River basin.

All four projects were completed, but in the fourth, a new bridge, constructed as an appropriate step in the project, was destroyed by an unusually severe storm and resulting floods in 1961. In the following year, concentrated efforts went into improving the drainage. Thus, the stretch of the lower stream, much of which flows through a coastal swamp, was diverted and widened. The 1961 flood disaster also caused much damage to property. Moreover, the additional cost to the Programme was significant in that the actual cost of the four projects was \$3.0Mn instead of the 1958 pledge of \$2.3Mn.

Transport and Communication (including Telephone): The inclusion of telephone expenditure as a component of the Programme arose from a lengthy labour dispute, in which sabotage to telecommunication property involved expensive losses (1960). A large part of the \$700,000 spent was, therefore, directed to replacing losses.

\$45.7Mn had been pledged for the other Transport and Communication projects, of which only \$35.9Mn was actually spent. The largest expenditure cut was in Roads and Bridges, where just \$23.9Mn of the planned \$32.0Mn was spent. This is especially remarkable, since all the road projects had been completed, except for a part of the North Coast Road in Tobago and the bridge over the Caroni River. Less than \$1.4Mn was pledged in 1958 for these two projects, and some work had been done on them by 1962. Moreover, preliminary surveys and designs were drawn up in 1962 for the reconstruction of the Western Main Road out of Port-of-Spain, to add to the original series of projects.

The two coastal steamers proposed to operate between Trinidad and Tobago were built by 1960, and went into operation immediately (February and June respectively), adding significantly to the transportation of passengers and cargo, a service which light schooners also provided.

The aviation projects went as planned, as the new terminal building at Piarco was completed. A well-constructed terminal apron included ten aircraft stands and several taxiways. The runway was lengthened and strengthened, the new length being 9,500 ft. (7,800 ft. in 1958). In Tobago, night landing facilities were installed and the 6,500 ft. runway was paved. "Necessary additional equipment was ordered in 1959 . . . [as] a centre for control and advice under the International Air Traffic Service"⁸ was established at Piarco. Radio navigational aids and drainage facilities were added in Tobago. About \$7.5Mn was actually used in aviation projects, much more than the \$2.9Mn pledged in 1958, and much of the difference is accounted for by projects added to the original plan.

To improve the country's port facilities, \$7.2Mn had been pledged (mostly for Port-of-Spain), but little was achieved. In Port-of-Spain, construction work was minimal, and the two barges employed in dredging the harbour had to be docked and completely overhauled. In 1961, the U.S. Government gave Trinidad and Tobago a crane barge and two tugs, and the country began work on a new warehouse. As a result, only \$1.1Mn was used by the Programme. Fig. 6.1 shows a plan of the Port-of-Spain harbour in 1960.

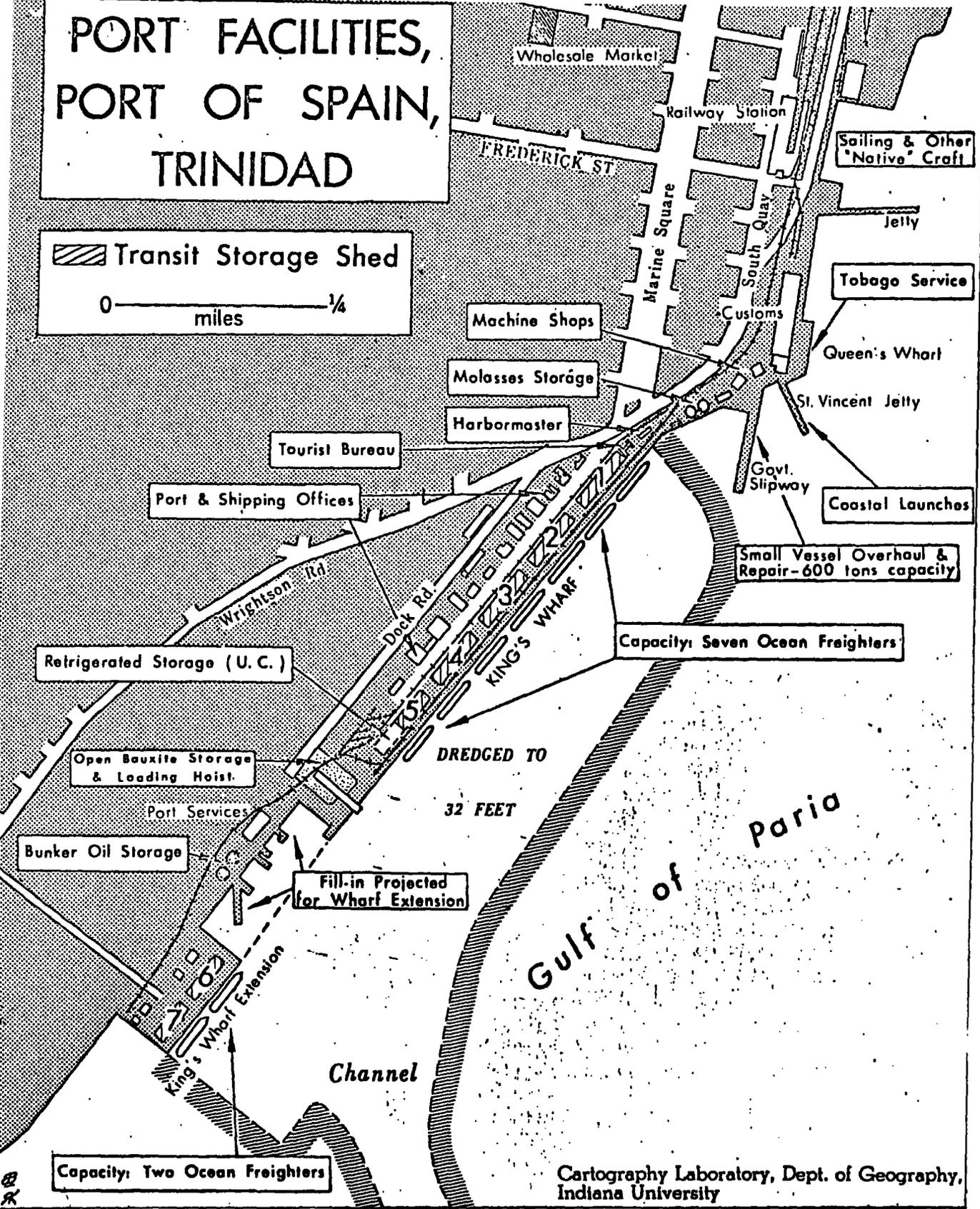
Electricity: The target set for increased production was over a safe capacity of 72MW (see Chapter V). By 1960, however,

FIGURE 6.1

PORT FACILITIES, PORT OF SPAIN, TRINIDAD

 Transit Storage Shed

0 ————— 1/4
miles



Cartography Laboratory, Dept. of Geography,
Indiana University

Source: Kingsbury (1960), p. 19.

the Government had got on-the-spot advice from the International Bank for Reconstruction and Development, which estimated the state's future needs to be higher. A loan of \$39Mn was negotiated, bringing the total funds allocated to \$52Mn, of which \$38.7Mn was spent by 1962. In 1961 alone, "over 10,000 industrial and domestic connections had been made,"⁹ and by the end of the Programme there were some 42,000 new customers.

Services to the General Public:

Public Building, Amenities and Local Government: As a result of intensive revision of proposed expenditure for the Programme, the expenditure in this department was cut from \$13.0Mn to \$6.0Mn. This step was taken to re-allocate funds to the infrastructure. Accordingly, there was much remodelling of older buildings to provide increased office space. San Fernando received the new licensing office originally promised; new post offices were built in Marabella and Morvant; a new court house was installed in Couva; community halls were completed in Port-of-Spain and San Fernando; and two blocks of flats were built in Scarborough. Besides these efforts by the Central Government, county councils were kept busy with general maintenance and minor road building. In Port-of-Spain the City Council had the new Town Hall completed.

Housing: In keeping with the housing policies of the

Programme (see Chapter V), 1494 family units were completed by 1962, of which 646 were self-help (540 had been planned originally), 403 of the 832 rental-mortgage units were ready for use, while blocks of flats totalled 445 units. A further 2,661 units were built with the help of Government loans.

Health and Sanitation: A new maternity block with 146 beds and a central block with 147 beds were both added to the Port-of-Spain General Hospital. Four operating theatres and a central steriliser were also added. Modernisation was also carried out in San Fernando; with additions in other districts, the total number of hospital beds increased from 1,984 to 2,502 by 1962, and mental hospital beds stood at 1,679 (1,032 in 1958). There were six new health offices in Trinidad, and two were being rebuilt. Two health offices were constructed in Tobago.

A large-scale sewerage scheme, involving the part of the conurbation stretching east from Port-of-Spain to Mt. Lambert, was planned to cost \$16Mn. However, it was in the early stages of construction at the end of 1962.

Education, Training and Employment: During the course of the Programme, 19,300 new places were made available at elementary schools (5,705 had been planned), 4,000 of which were provided through grants to denominational schools. Similar grants allowed

for 1,500 more secondary school places, bringing the overall total to 7,900 secondary school places. Besides these, a technical institute was opened in San Fernando for 200 students, while 1,000 places were made available at another in Port-of-Spain. A teachers' training college was opened at Mausica to turn out 100 teachers each year. A polytechnic institute was commenced in Port-of-Spain, offering evening courses in the arts and sciences to adults, leading up to a university level. In 1960, the Imperial College of Tropical Agriculture was absorbed by the University College of the West Indies (now the University of the West Indies). To the Agricultural College were added a faculty of Engineering and, later, one of Liberal Arts.

According to plan, many village councils were organised, from which community centres were started. A special Community Education Centre was built in St. Ann's, complete with a dormitory block to accommodate 20 male and 20 female students, plus matron's quarters, a common room and a workshop. A holiday camp was prepared on Nelson Island, providing camping facilities for juveniles. New branches of the Central Library were opened in a few districts.

What had started as a "Depressed Areas Programme" designed to help locate jobs for the unemployed (a part of Labour and Social Services - see table 6.1), became a separate "Special

Works Programme" in 1961. Projects financed by this unit cost \$5.3Mn by 1962. Concentrated in Laventille, Belmont, Diego Martin, San Juan, El Socorro, Barataria, Tunapuna and throughout Tobago, they were chiefly aimed at reducing the level of crime and delinquency brought about by unemployment.*

The general reflection of employment in the various sectors of the economy will be discussed in greater detail in Chapter VII, when the topic of structural changes in the labour force is taken up.

The West Indies Federation: The influence of this Federation on Trinidad and Tobago has been largely intangible. It came into being in 1958, and was dissolved by mid-1962. Probably the greatest impact was in social terms, arising from immigration from other West Indian Islands, which created a new concept of nationhood. However, this nationhood had to be revised when Trinidad and Tobago became independent on August 31st, 1962. The campaigning of various island groups to secure the Federal capital site, the final nature of the Federal Constitution, the current reasons for existing as a national entity, and the then popular concept of regional unity all had a social and political influence on Trinidad and Tobago. It is, at best, difficult to measure the impact of these social and political

*Significantly, 1961 was an election year (see Chapter VII).

factors, although hints of their influence are still apparent in the present social structure of the country. A section in Chapter VII attempts to survey this topic within the limits of this thesis.

The more tangible effects of the Federation were small in comparison. Each of the ten units contributed an annual mandatory levy to the Federation totalling \$9.12Mn, of which Trinidad and Tobago gave \$3.52Mn. The latter had pledged further funds, bringing the total (1958-62) to \$26.2Mn, of which \$12.3Mn had been spent by 1960.¹⁰ The wave of immigration from the smaller islands, which had begun during the mid-1950's, increased with the administrative development of Port-of-Spain as the provisional Federal capital. Furthermore, movement of people within the Federation was freer for each unit. Thus, an even greater influx of people in search of jobs resulted. Office space was insufficient for Trinidad and Tobago's domestic needs and the presence of the Federal Capital only intensified this shortage.

Having hereby outlined the skeletal impact of the Federation on Trinidad and Tobago, an introduction to the basic setbacks embodied in the Programme will follow.

Basic Setbacks: The overall cost of the Programme would probably have been higher, and/or the relative importance of spending in the various components would have been different, had it not been

for delays in the progress of many projects. These delays could largely be traced from the administrative level:

Experience has revealed several deficiencies. One of the most important is that the administration - the Ministries and executing agencies - has not been trained to meet adequately the rapidly expanding and changing demands being made upon them and especially their crucial role in the planning process. Another deficiency has been the low productivity of skilled and unskilled labour directly employed by Government. While inadequate supervision has played a great part in this, the attitude of labour itself is largely responsible.¹¹

The basic shortage of trained personnel, of course, resulted in lower productivity, and this was not only in the Government service, but in other sectors as well. This factor and the "attitude of labour" will be more thoroughly dealt with in the next chapter.

The shortage of trained personnel was felt almost everywhere throughout the Programme. Delays, however, were expressed in different ways in certain major projects: (1) In the organisation of I.D.C. schemes, for instance, progress was delayed because sufficient trained people were not immediately available. (2) Much of the money allocated to agricultural projects had not been spent, mainly because of a lack of co-ordination in planning, arising from the administrative complexities in the agricultural development programmes. (3) Plans for the expansion of the port facilities

in Port-of-Spain were complex. A great deal had to be done at an expense beyond the immediate means of the Programme. Furthermore, numerous channels of expertise needed to be tapped, and foreign loans and aid applied for. Negotiations dragged on causing long delays, thus creating a critical bottleneck in the economy. (The sewerage scheme was also held up by negotiations.) (4) Electricity projects had to be altered, since the demand from industry grew faster than had been expected. (5) As stated previously, some of the contracts for projects were awarded to private firms (see Chapter IV), and due to poor management, many were behind schedule with much money wasted. Accordingly, the Government had to include elaborate clauses in the contracts to ensure adequate use of funds. (6) In general, much time and energy was spent increasing expenditure in one component by cutting back in others, as planners tried to sort out priorities.

Some of the setbacks were unforeseeable, such as the loss of the bridge in Diego Martin mentioned earlier. Probably the most disastrous, however, was the number of strikes that occurred during the time of the Programme. Not only did they result in a great loss of man-days (see table 6.2 below), but often Programme projects were delayed, other industries were indirectly but decisively hindered, sabotage was sometimes a nuisance, and some strikes were so costly to

Table 6.2

Number of Man Days Lost Through Industrial Disputes

Year	Agriculture:		Building	Mining. & Refining (Oil)	Manufac- turing	Transport & Comm.	Other	Total
	Total	Sugar						
1954	64,237	64,087	25	-	-	-	5,286	69,548
1955	19,160	-	-	-	-	1,500	-	20,660
1956	213,832	213,600	-	-	88	10	-	213,930
1957	350	-	-	-	-	2,098	664	3,112
1958	-	-	400	40	3,790	8,850	888	13,968
1959	2,539	590	6,015	3,570	1,460	2,982	6,817	23,383
1960	42,379	335	570	152,810	4,275	65,657	9,532	275,223
1961	94,218	1,738	8,990	-	21,014	10,715	10,168	145,105
1962	124,852	122,352	6,260	1,350	1,266	10,859	20,070	164,657
1963	23,760	19,938	33,322	126,487	2,515	9,262	9,615	204,971

Source: Trinidad and Tobago. Central Statistical Office: Annual Statistical Digest, 1964, p. 51.

the management in question, that labour had to be cut back.* Such consequences were detrimental to the employment situation in the long run.

Achievement of Main Goals: The Programme quoted three main goals: increased employment to meet the growing demand, a higher level of productivity in the economy, and an expansion of Government services to the general public (see Chapter V).

Employment was the most crucial issue facing the planning bodies in 1957, and, because there was insufficient current data, only rough estimates could be made. For example, it was not known what proportion of the labour force was without work. Neither was there adequate information on the level of underemployment in such sectors as agriculture or service industries. Nevertheless, it was hoped that the steps taken in the Programme to expand the entire economy would create 17,000 jobs in the basic industries, and Government along with the service industries would absorb a large part of the 18,000 additional jobs estimated to be needed. These were necessarily rough estimates (as indicated in Chapter V). To complicate matters further, the impact of the new Federal Capital site would place still greater strain on the employment

*It should be noted here that in most places of employment there were more people employed than was necessary (due to welfare tendencies in employment practices, as well as the continuous adoption of labour-saving techniques). Thus, the element of favour was present in labour-management relations.

situation. This impact was, however, so nebulous that the overall problem needed an immediate survey and report to sum up the situation as clearly as possible. Yet, according to a 1965 report, one finds: "Trinidad and Tobago has never conducted a comprehensive manpower survey to establish the extent of the country's manpower requirements."¹²

Between 1958 and 1962 the employment in the manufacturing sector was expected to increase by 9,000 workers, 4,000 of whom would be absorbed by the petroleum industry. The data available for the manufacturing industries covers only those which employed over ten persons. Such data indicated that employment had increased from 10,067 to 13,362 by May 1962. Like the rest of the sector, employment in the petroleum industry did not increase as expected. This was mostly due to the comparatively larger emphasis on marine drilling which is less labour-intensive than on-shore drilling (see Chapter IV). Thus, its labour force was hardly expanded during the period in question. Expected employment through tourism had also fallen short, while the situation in agriculture was unclear.

In 1959, the Government employed 6,977 (an average of monthly estimates) in projects under the Programme. The figures for 1960 to 1962 were 7,845, 8,216, and 8,687 respectively. The results of the "relief employment" are not included in the above

statistics, however.

In 1963, an Interim Programme was compiled "to give time for an assessment of the first Programme and for an appraisal of the prospects for the next period."¹³ Many of the projects were still in progress, giving the Government a chance to keep up the level of employment during the year prior to the Second Five-Year Plan (1964-68). Nevertheless, the first Programme had failed to accomplish respectable achievements in employment.

Productivity: Without adequate data on employment, it was impossible to measure accurately the relative levels of labour productivity before and after the Programme. From tables 3.1 and 3.2 in Chapter III, an idea of the structural change taking place in the economy was conveyed, in terms of the relative importance of the sectors to the GDP. The data in table 6.3 only gives a rough idea of the trends in labour productivity, some of which may have been subject to great fluctuation between 1951 and 1960, both in specific sectors (e.g. petroleum and the primary sector) and in the economy as a whole.

When other specific measures of productivity, such as per capita income, wages and prices, and productivity of capital formation are examined, however, a considerably more fruitful discussion could evolve. Therefore, the topic is more appropriately dealt with in Chapter VII.

Table 6.3

Labour Productivity (by Sectors)

	<u>1951</u>		<u>1960</u>		<u>1964</u>	
	Working Population* (,000s)	Output Per Man (\$)	Working Population* (,000s)	Output Per Man (\$)	Working Population* (,000s)	Output Per Man (\$)
Agriculture	61	877	55	1,869	76	1,470
Petroleum industry	16	5,844	16	16,462	15	19,693
Sugar refineries			4	4,200	4	4,500
Other manufacturing (including quarrying)	25	1,820	39	2,487	40	3,135
Construction	10	840	30	1,353	33	1,854
Commerce and banking	19	1,889	35	3,920	42	3,333
Government	24	1,208	39	2,115	52	2,371
Other services	<u>40</u>	<u>1,157</u>	<u>45</u>	<u>2,791</u>	<u>36</u>	<u>5,564</u>
Total	195	1,600	263	3,292	298	3,608

*Figures of working population in petroleum industry and sugar refineries were obtained from a series regularly published in the Quarterly Economic Report. These figures cover the persons working at end of every quarter in establishments employing ten persons or more. Figures of working population in other sectors for 1960 and 1964 were obtained from the 1960 population census and from the subsequent Continuous Sample Survey of Population. They cover all persons who worked in the year preceding the census or the survey. Figures of working population in sectors other than petroleum industry for 1951 were obtained from an estimate published in the Annual Statistical Digest, 1957. Their exact coverage is unknown. Accordingly, figures of working population in 1951 are not entirely comparable with figures for subsequent years except in the petroleum industry.

Source: International Monetary Fund Report of Trinidad and Tobago, Part II, Appendix, Table H., 1965.

Amenities to the general public bore great emphasis during the planning and execution of the Programme, and, even as structural emphases changed during the five years, the components closely related to amenities increased their overall share of the expenditure. Certain pledges never materialised (e.g. the sports stadium), but, whereas expenditure on Public Building etc., fell from \$13.0Mn (in the 1958 pledge) to \$6.0Mn and Local Government from \$19.1Mn to \$13.5Mn actual expenditure, the more directly productive amenities increased their spending, e.g. Housing - from \$12.2Mn to \$23.4Mn, and Health - from \$8.6Mn to \$24.3Mn. Labour and Social Services and Education also had small increases, and the Special Works Programme was added, at the cost of \$6.0Mn (see table 6.1). Many of these increases, especially the smaller ones, may be due largely to price and wage increases. There is, however, quite substantial evidence to support the fact that overall expansion did occur in social overhead capital as a result of the Programme.

We must now consider the achievements of the Programme in the light of certain geographical implications, particularly where geographical situations have imposed unavoidable limitations on the planning process.

FOOTNOTES TO CHAPTER VI

1. "Trinidad and Tobago in the Top Ten of Trading Nations." Enterprise, Dec. 1962, p.14.
2. Trinidad and Tobago Government: Draft Second Five-Year Plan (1964-68). (Port-of-Spain, Government Printery, 1963), p.34.
3. _____: First Five-Year Development Programme (1958-62). Report for 1960. (Port-of-Spain, Government Printery, 1962), p.12.
4. Enterprise, June, 1964, p.13.
5. Trinidad and Tobago Government: Draft, Second Five-Year Plan (1964-68). (Port-of-Spain, Government Printery, 1963), p.37.
6. Krapf, Kurt & Oscar Michel: Tourism in Trinidad and Tobago. (Official-unpublished), p.11.
7. Trinidad and Tobago Government: Draft, Second Five-Year Plan (1964-68). (Port-of-Spain, Government Printery, 1963), p.41.
8. _____: First Five-Year Development Programme (1958-62). Report for 1960. Port-of-Spain, Government Printery, 1962), pp. 14, 17.
9. _____: Draft, Second Five-Year Plan (1964-68). (Port-of-Spain, Government Printery)1963), p.38.
10. _____: Estimates of Revenue and Expenditure, 1962. (Official-unpublished), pp.69-71.
11. _____: Draft, Second Five-Year Plan (1964-68) (Port-of-Spain, Government Printery, 1962), p.45.
12. _____: Country Report - Manufacture Sector 1966. (Official-unpublished), p.54.
13. _____: Draft, Second Five-Year Plan (1964-68). (Port-of-Spain, Government Printery, 1963), p.44

CHAPTER VII

BASIC LIMITATIONS TO DEVELOPMENT PLANNING

IN

TRINIDAD AND TOBAGO

If we consider geography as the study of man in relation to his environment,¹ then the point of greatest Geographical significance associated with the Programme must be the rapid emergence and growth of the political, economic and social awareness of the population. Such awareness is hereby measured as a function of political activities especially in connection with elections.*

Political Trends: Prior to 1946, the voting franchise was restricted to property owners with incomes of \$2,400 a year. In that year adult franchise for all over 21 years of age was adopted, but only 52.9% of the electorate voted (see table 7.1). In 1950 the percentage had risen to 70.1%, as larger numbers of the poorer, less-educated people were attracted to the polls. At first, the needs of these people were not adequately voiced by representatives. By 1956, however, these needs had become major issues in an atmosphere

*One must bear in mind that such a measure does not by itself create an accurate picture of the political, economic and social awareness of the population, but a more elaborate approach is not justified in a thesis of this nature.

Table 7.1

**NUMBER OF REPRESENTATIVES, ELECTORS AND VOTERS
ANALYSIS BY ELECTORAL DIVISIONS**

ELECTORAL DIVISION	1946 ²				1950			
	No. of Repre- sentatives	No. of Electors	No. of Voters	No. of Voters as % of No. of Electors	No. of Repre- sentatives	No. of Electors	No. of Voters	No. of Voters as % of No. of Electors
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Port of Spain North	1 ³	21,326 ³	7,442 ³	34.9	1	15,059	9,121	60.5
" South	1 ³	22,822 ³	4,494 ³	41.6	1	12,901	8,409	65.1
" East	-	-	-	-	1	15,001	9,310	52.1
San Fernando	1	14,121	8,230	58.3	1	15,205	10,298	67.3
St. George West ...	-	-	-	-	1	15,003	9,627	64.0
St. George East ...	-	-	-	-	1	14,009	10,016	71.5
Laventille	1	65,351	24,363	37.3	1	15,768	8,072	51.1
St. Joseph	-	-	-	-	1	16,025	10,741	67.0
Tunapuna	-	-	-	-	1	14,465	11,513	79.5
Caroni North	-	-	-	-	1	15,202	11,623	76.4
Caroni South	1	28,640	16,616	58.0	1	16,986	12,102	71.2
Pointe-a-Pierre ...	-	-	-	-	1	18,680	13,993	74.9
Naparima	1	40,469	26,058	64.4	1	15,949	12,550	78.7
St. Patrick West ...	-	-	-	-	1	20,761	14,991	72.2
St. Patrick East ...	1	33,411	23,251	69.6	1	16,246	12,039	74.1
Eastern Counties	-	-	-	-	1	16,906	12,618	74.6
Ortoire-Moruga ...	1	21,863	13,360	61.1	1	16,167	11,894	73.6
Tobago	1	11,509	8,467	73.6	1	12,717	9,541	75.0
Total	9	259,512	137,281	52.9	18	283,150	198,458	70.1

1. Limited franchise restricted by property and age qualifications.

2. Adult franchise was adopted.

3. In 1946 Port of Spain was divided into two electoral divisions - North and South.

Source: Trinidad and Tobago Central Statistical Office: Annual Statistical Digest, 1964.
Port-of-Spain, 1964 p. 97.

Table 7.1 cont'd.

**NUMBER OF REPRESENTATIVES, ELECTORS AND VOTERS
ANALYSIS BY ELECTORAL DIVISIONS**

Electoral Division	1956				Electoral Division	1961			
	No. of Representatives	No. of Electors	No. of Voters	No. of Voters as % of No. of Electors		No. of Representatives	No. of Electors	No. of Voters	No. of Voters as % of No. of Electors
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Port of Spain North...	1	10,920	8,766	80.3	Port of Spain North...	1	11,795	10,191	86.4
" South...	1	11,820	9,380	79.3	" South...	1	11,696	9,736	83.2
" South-East	1	11,072	8,408	75.9	" West...	1	11,565	9,626	83.3
" North-East	1	13,227	10,466	79.1	" East...	1	11,773	9,886	84.1
San Fernando East ...	1	10,804	8,619	79.8	San Fernando East...	1	14,066	12,579	88.7
" West ...	1	10,289	8,437	82.0	" West ..	1	12,660	11,251	88.9
St. George East.....	1	14,865	11,688	78.6	Diego Martin.....	1	15,274	12,955	84.8
St. George West.....	1	16,102	12,460	77.4	Maraval.....	1	14,378	12,280	85.4
Laventille.....	1	19,023	12,263	64.5	Laventille.....	1	13,729	11,231	81.8
San Juan.....	1	18,677	13,441	72.0	San Juan.....	1	15,107	12,882	85.3
St. Joseph.....	1	12,315	9,922	80.6	Barataria.....	1	15,016	13,351	88.9
Tunapuna.....	1	17,241	15,066	87.4	St. Joseph.....	1	14,157	12,305	86.9
Caroni North.....	1	15,023	12,928	86.1	Tunapuna.....	1	12,826	11,593	90.4
Caroni South.....	1	10,129	8,358	82.5	St. Augustine.....	1	13,523	12,306	91.0
Caroni Central.....	1	14,015	11,994	85.6	Arima.....	1	12,592	11,040	87.7
Naparima.....	1	16,716	14,382	86.0	Chaguanas.....	1	12,615	11,481	91.0
Pointe-a-Pierre.....	1	15,021	12,599	83.9	Couva.....	1	12,890	11,936	92.5
Ortoire-Moruga.....	1	16,063	12,749	79.4	Caroni East.....	1	13,080	11,395	87.1
St. Patrick East.....	1	15,828	13,229	83.6	Pointe-a-Pierre.....	1	12,785	11,726	91.7
St. Patrick West.....	1	13,899	10,986	79.0	Naparima.....	1	12,547	11,336	90.7
St. Patrick Central ...	1	14,866	12,036	81.0	Princes Town.....	1	13,167	12,141	92.2
St. Andrew-St. David	1	15,409	12,316	79.9	Fyzabad.....	1	14,339	13,422	93.6
Nariva-Mayaro.....	1	11,748	9,411	80.1	La Brea.....	1	11,548	10,362	89.7
Tobago.....	1	13,956	11,630	83.3	Point Fortin.....	1	12,759	11,393	89.3
					Toco/Manzanilla.....	1	10,658	9,063	85.2
					Nariva.....	1	12,749	11,409	89.5
					Ortoire/Mayaro.....	1	12,461	11,099	89.1
					Siparia.....	1	12,654	11,515	90.9
					Tobago East.....	1	5,644	4,370	86.5
					" West.....	1	8,460	7,082	83.7
Total.....	24	339,028	271,534	80.1	Total.....	30	378,511	333,512	88.1

of greater political awareness. Furthermore, with the advent of more social idealism, the general character of elected representatives changed.

Trinidad had been seeking a leading role in the West Indies Federation, but had so far been unsuccessful in its bid, as the corruption of the Trinidad and Tobago Government had become scandalous to other islands of the Caribbean. The general public was disgusted with such an image, constantly reminded of it by immigrants from the smaller islands, and impatient for a change of government.

In the post-war years there had been an increasing demand for education, as it became interpreted as the surest means whereby poverty could be evaded. Housing conditions were poor, in relation to the standard of living (per capita income). Rapid urbanisation had been accompanied by slum conditions. The question of unemployment was growing into a crucial issue, compounded by a rising rate of immigration in the mid-1950's. This new influx was mainly from the other Eastern Caribbean islands, consisting of people in search of employment. Moreover, the constitution of the Federation would allow for easier movement between units.

The People's National Movement (P.N.M.), a newly-organised party recognised the issues that would be of greatest interest to the population, as did the People's Democratic Party (P.D.P.). The

latter, however, was not as well organised. In contrast, the former re-ignited a buoyant spirit, mainly fortified by the successes of their energetic leader - Dr. Eric Williams - in attracting the siting of the Federal Capital to Trinidad, in cooling a growing racial tension in the early stages before it had become explosive, and later, along with the unit leaders in the Federation, in campaigning gallantly, though unsuccessfully, for a stronger, more functional federal government.²

In 1956, 80.1% of the electorate voted in the general elections, and the P.N.M. was elected. For sixteen months following, the Government was busy campaigning for the award of the Federal Capital and preparing a draft for the First Five-Year Development Programme. The excitement of the months leading up to the Federal elections of 1958 continued almost without a break, as parties campaigned throughout the West Indies. The political awareness of the people was clearly higher than ever before.

Table 7.1 does not include the Federal election, but it indicates the rising political involvement in Trinidad and Tobago, the latter island showing a high percentage of voting activity from the onset in 1946. The rural areas of Trinidad also displayed a higher level of voting activity than the country's average. In general, prior to 1956, successful candidates in these constituen-

cies were usually independent;* from that time onward, almost all were members of one of the major parties.

Hitherto, the large East Indian population of Trinidad (36.5% in 1960) had been regarded with suspicion by the other West Indian islands** and by the English advisors. P.N.M. propaganda encouraged the population to set for the other West Indian islands an example of racial harmony. This example was eventually most persuasive in winning for Trinidad the site of the Federal Capital.

Politically, the Development Programme was a new thrust and it was given considerably more publicity than its predecessors - the Economic Programmes of 1951-55 and 1956-60 (see Chapter V). Evidence of what the Government was doing could be seen throughout the territory. New Housing projects were being erected; new schools were being built; a great deal of other construction was in progress; research projects and experimental stations were opened; and all bore the insignia: "First Five-Year Development Programme - 1958-1962". Thus, as per capita income increased, the popularity of the new Government became such that, in the 1961 general elec-

*This is not surprising when we consider the necessary qualifications of a voter (see above - an elementary school headmaster earned less than \$2,000 a year in 1946). Moreover, candidates were in the \$8,000/yr. income bracket.

**Except for small communities in Jamaica, there were virtually no Indians in the other British West Indian islands.

tion, it was re-elected by an overwhelming majority.

Aims of the Programme in Geographical Perspective: It was expected that increased production, induced by development planning, would provide more employment opportunities. In addition, the Government planned to create sufficient social overhead capital to keep pace with the rising living standards. Increases in employment, productivity and amenities had been set forth as the most important targets; but trade policies were notably absent.

The original plan (1958) had referred to the dependence on trade protection for certain crops and the temporarily favourable world market prices of others. However, no definite policy had been made pertaining to future markets and their scope. This is significant, since the value of each of both imports and exports (at current prices) was well in excess of 40% of the GDP for each year prior to 1962 (see Chapter IV). In view of this, some observations are offered toward a clearer focus on this apparent neglect of the facts of economic life.

Firstly, since the export of petroleum and petroleum products averaged almost 84% of total exports between 1958 and 1962 (see Chapter IV), the growth of the industry had controlled the growth of exports. The influence of the petroleum industry on imports had been less than exports, but had actually grown in importance from 25.3% to 28.1% (1956-58). It was 31.4% in 1960,

45.6% and 44.9%, respectively, in the two following years (see table 7.2 below). The I.D.C. in the early stages of the Programme had insufficient scope to be of assistance to the oil industry. It had, nevertheless, realised the importance of the future of the industry to the economic growth of the country. Thus, fiscal benefits were offered, which later helped to expand refinery production. Moreover, towards the end of the Programme, the Government "asked for United Nations' assistance in setting up a Commission of Inquiry into the oil industry [to] . . . examine and report on the organisation, structure and finances of the industry . . . in relation to international oil industry economics."³

Secondly, the efforts of the Programme in the primary sector were also geared towards export, of which only sugar and cocoa exceeded 1.0% of the country's total (see table 7.2). There was, however, an uneasy reliance both on protection, and on the possible continuation of favourable prices. This over-optimism was not conducive to the type of planning needed to prepare the country for the rapid structural re-adjustment necessary in the export sector. Positive policies were introduced: the Marketing Board was supposed to expand its service among local farmers; such a step would increase local production and provide crucial import substitutes (see Appendix II to Chapter III). Facilities for forestry and fisheries were also improved to provide import

Table 7.2

Balance of Trade, 1956-62 (Selected Items)

\$Mn

	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>
Exports	330.2	392.6	424.9	449.1	491.3	593.5	592.0
Oil and products	81.3%	82.6%	82.4%	83.6%	82.4%	85.2%	85.3%
Sugar	7.8%	7.8%	7.4%	7.4%	7.6%	7.3%	5.3%
Cocoa	3.2%	2.2%	3.0%	2.3%	1.8%	1.1%	1.4%
Manufactured fertilizer	-	-	-	-	1.3%	1.2%	1.4%
Imports	301.5	355.8	412.0	448.1	504.0	584.0	605.6
Crude oil	25.3%	24.7%	28.1%	29.2%	31.4%	45.6%	44.9%
Balance of trade (visible)	+28.6	+36.7	+13.0	+01.0	-12.7	+09.5	-13.6

Source: Trinidad and Tobago Government: Trinidad and Tobago Overseas Trade Report, 1964, introduction.

substitutes, with the hope of later producing for export. However, the point remains that policies such as this regarded increases in trade as incidental to domestic changes and were not directed at positive policies governing trade and port facilities.

On the other hand, the I.D.C., by helping to expand the manufacturing sector, would diversify the export sector,* as well as adding to import substitutes. One of the notable achievements of the Corporation was the establishment of a large fertilizer plant which almost immediately accounted for 1.3% of total exports (see table 7.2). The plant was over 90% export-oriented.

If some of the aforementioned efforts of the Programme were partly to improve the country's trade situation, they were all made a mockery of by the failure to improve the port facilities in Port-of-Spain. This, the largest port, had been neglected for such a long period that immediate and swift steps were necessary in 1958, if the facilities were to meet the demands of the rapidly growing economy. Instead, the combination of a shortage of funds and a scarcity of adequate advisors slowed negotiations, resulting in a bottleneck to the rest of the economy.

*One should not, however, lose sight of the great extent to which the general low efficiency of production in the manufacturing sector limits the scope of exports from this sector, in the light of competitive world standards, at this early stage of development.

Basic Productivity Trends (1958-62): The importance of the oil industry to the entire economy was considerably more enhanced by increased production than by the provision of additional employment opportunities. In fact, as the Programme proceeded, it became clear that expanded productivity in this industry could be vital to the economy, but by the capital-intensive nature of investment, this would be at the expense of added employment. In relation to the productivity of other countries, that of Trinidad and Tobago was low because of the extremely high exploration and drilling costs (see Chapter III). Furthermore, marine drilling had become more promising as land drilling was declining, but the former was even more capital-intensive. Overall reserves in 1960 stood at 300Mn barrels (production in 1959 - 40Mn barrels), giving crude oil production a life expectancy of about eight years at the current rate of exploitation, barring new discoveries.⁴

This meant that employment would decline in the future. It had built up during the 1950's to 16,426 in February 1960, but had declined thereafter to 14,719 by August 1962 - a trend that has largely continued. "A partial explanation of the decline of the labour force in this sector may be the switch-over from land to marine drilling."⁵ One hope for continued exploitation lay in the reserves of natural gas still available, but full use was not

then practical.* The newly emerging petro-chemical industry, however, was expanding rapidly and by 1962 accounted for 20.4% of the total value of the manufacturing sector, second only to oil production and refining. Both industries are highly capital-intensive, but, through the multiplier effect, the revenue passed on to the public sector is very significant.

In 1958, the revenue derived from oil was much less in proportion to the value of the industry's output than it would have been in most other oil-producing countries. Thus, a long delay in completing the financial accounts of the Programme was caused by elaborate surveys and the negotiations which followed.

Walter J. Levy, "the well-known oil consultant of New York"⁶, was commissioned to examine and report on the oil situation. He submitted an extensive report on his observations, in which he pointed out the importance of having companies with overseas links. Off-shore exploration, although very expensive, was significant to

*The Government had unsuccessfully urged the oil industry to increase gas production and refining, but given the facts that (1) much of the natural gas was used to increase the flow of the wells, (2) the average output per well in Trinidad was 35 b/d compared with 270 b/d in Venezuela, and over 4,000 b/d in the Middle East, (according to Petroleum Press Service, vol. 27, 1960, p. 16), and that (3) oil only occurs in isolated pools in Trinidad, it would seem that the importance of maintaining a constant rate of production from the well, at the cost of natural gas refining would help improve the productivity of the industry. Moreover, productivity per man was three times greater in Venezuela, thus helping to provide the greater output per well.

the future of the industry. It was suggested, however, that government revenue could be duly increased by making amendments to the terms for new concessions: (1) Performance obligations were not stringent and, if amended, could speed up development. Thus, companies would not be allowed to hold leased areas idle, while other companies wanted to explore them. (2) Royalties should be based on the crude oil value rather than on production value, which "would reduce fluctuation and make the rate more stable and predictable."⁷ (3) Hitherto, total government revenue from oil was only 40% of taxable profits. A 50:50 policy was suggested, since most other countries had at least that share. (4) Furthermore, most other countries did not include a depreciation allowance in the profit tax agreement. Thus, Trinidad was urged to abandon it.

At this point, one has to examine the general situation. While the petroleum industry is relatively simply associated with natural resources, other sectors need to be seen in the context of policies of economic planning.

THE DILEMMA OF ECONOMIC PLANNING

Wherever a development programme is being engineered with limited financial resources, choices have to be made. Priorities need to be clarified and, when social factors are included, basic aims become extremely complex.

The Trinidad and Tobago Experience: Throughout the primary sector, there was a critical shortage of available capital. The manufacturing sector was the backbone of the economy and had to undergo structural change. This would supplement the inevitable decline of the dominant oil industry. Much had to be done in the infra-structure, and at the social level, to provide a favourable atmosphere for growth in the entire economy.

The aims of the Programme were severely complicated by the trend of social, political and economic events leading up to it. Urbanisation had been a steady process after 1940, which would have been ideal for the agricultural situation had it not been for rising immigration. This latter factor created some new elements in the situation: People came from the other West Indian islands in search of employment, especially during the mid-1950's when the economy was experiencing its fastest rate of growth. There never was a surplus of jobs, but, as Trinidad gained a reputation of being a "land of opportunity", the inevitable exaggerations were inculcated throughout the West Indies, and a labour surplus built up in the urban areas. Soon, the build-up had become so great that it infringed on the movement of the population from the rural areas and caused a renewal of population growth there.*

*The I.M.F. report for Trinidad and Tobago (1965) indicates that

In the countryside, the agricultural structure presented a dichotomy between the plantation farmers and the small-croppers. The former depended on export crops primarily for a living, while the latter grew foodstuffs almost exclusively, selling the surplus for local consumption. The small farmer, who sold some of his produce to the "middleman", almost always lived on a marginal basis in terms of income in cash and kind and supplemented his income when necessary by fishing if he lived near to the coast. A small group of men (about 20) generally shared a dinghy and fished near to the shore. Most of the fish thus caught was consumed in the village. In the larger fishing villages, however, surpluses were bought by retailers who vended from door to door inland, and/or "middlemen", who in turn sold to the adjacent market centres.

In the urban areas there was more visible unemployment than in rural areas. The manufacturing sector had been expanding, but not keeping pace with the growing labour force. The oil industry offered higher wages than could other industries. As a

the labour force in the primary sector increased between 1946 and 1951, declined from 61,000 to about 54,000 by 1956, and increased again to 76,000 by 1964. This seems to coincide with economic growth and job opportunities (see Chapter III, IV & VI). The overall employment situation was crucial during the period of 1958-62, since the existence of the Federation further facilitated the movement of people from the other West Indian islands.

result, in the mid-1950's, there was a significant movement of labour from the adjacent sugar factories to the oil companies. Immediately reacting to this, many sugar companies increased wages. Union activities, which were building up during this period, by 1958, represented a definite influence on wage structures in much of the economy. One direct result of this influence has been the tendency to manufacture goods at high cost in Trinidad and Tobago.*

As the economy expanded, so did trade. The manufacturing sector demanded more imported capital goods, while the rising living standard was accompanied by a greater demand for imported consumer goods. Exports also increased, but port facilities were not accordingly expanded.**

*It should be noted here that management always tended to match wage increases for the workers with its own wage increases, thus increasing prices. Frequent price increases were feasible, because of the prestige accruing to people who buy expensive items. Of course, most of the enterprises involved in this phenomenon depended on local consumption for the bulk of their sales, rather than on exports.

**This is the classical dilemma of the transition stages in development: how to balance the demands of increased consumption and investment with the slow accretion of increased wealth from the same investment. In the case of Trinidad and Tobago, unlike Libya, for instance, the wealth of oil is not great enough to produce a surplus over and above investment in production and infra-structure as well as personal consumption. In this sense, the limiting factor has been the absence of any substantial relative advantage derived from resources or skills, whether in primary, manufacturing or service, e.g. tourist sectors.

To finance the Programme, much money had to come from income taxes. In 1958, a family income of \$3,000 yielded only \$36 (1.2%) tax.⁸ A small increase would have negligible effect on the total government revenue, whereas a needed increase to about 10% (which is low by the standards of industrial countries) would have caused a public outcry. Furthermore, the high incidence of tax evasion by the self-employed and those in high-income brackets was widely known. At face value, the growth of the economy was slowing down: GDP increase 1954-57 averaged over 13% annually - 1957-58 was 4.9%. This meant that government revenue would have been low at the beginning of the Programme. As it turned out, tax evasion continued to be prevalent. The attempt to raise funds through the sale of government securities was only half-hearted, and produced a small fraction of the \$8Mn expected (see Chapter V). Negotiations with the oil companies continued until late 1959, contributing to the numerous shortfalls in the Programmes prior to 1960 (by which time only 65.8% of the funds pledged for the period 1958-60 were spent).

The Primary Sector: Given the Trinidad and Tobago experience, the primary sector had to maximize production to feed the urban settlements. If productivity were also increased, local food prices could be stabilised and staple-food imports reduced.

An elaborate Extension Service had been planned to introduce to the farmers more productive techniques. The feasibility of economic investments in agriculture was investigated, and the Agricultural Credit Bank supplied with additional funds. The Marketing Board was to be reorganised to streamline the movement of goods from the farm to the urban centres, giving maximum returns to the farmer, with transport costs and retail market prices considered. The Board had also planned to improve the distribution of retail goods in urban settlements.

The primary sector was probably most hard-hit by the shortage of funds, since its major projects were so intricately interdependent. In agriculture, capital was not readily available due to the limited loan service. The reorganisation of the Marketing Board had negligible impact. The Extension Service, however, rendered significant assistance to numerous farmers despite the general lack of support to the Service from the other major agricultural departments.

The small-croppers most remote from the urban areas had the greatest need for capital to invest in their land. Often, too remote to be affected by the Extension Service, their attitudes toward investment and maximum production had to be changed. More immediate, however, was their need for a better collection service (see Appendix II to Chapter III), because, without marketing

outlets, capital would not be created for further investment.

The Marketing Board could serve the agricultural sector in quite a few decisive ways. Firstly, it could develop a more efficient and complete collection service. It could also collaborate with vendors in market centres to have the latter sell the produce collected by the former. In view of the employment situation, it could further diversify the market centres and employ permanent vendors to handle its produce. It would then be in a better position to stabilize local prices. It would, however, have to expect competition from the "middlemen".*

Nor were the services confined to the small-croppers' security. The plantation owners often needed to be protected from undue exploitation by certain manufacturing firms. For example, the sale of copra (raw) had been outlawed on the world market. Consequently, the commodity had to be processed for export. Thus, without government regulation, at a time when the coconut growers were burdened by the red-ring disease, they were offered very low prices by the manufacturers. Prices could have been stipulated at a constant percentage of the current world

*The Board's actions would not have created much unemployment among the "middlemen". Wholesale prices would be stabilized, promoting more perfect competition; "middlemen" could either compete directly, or deal with the sub-standard produce - as there would always be a market for inferior foodstuff.

price.

Most of the above suggestions had previously been considered by the Board, although not carried out, for financial reasons. Although limited by the lack of sufficient funds, the Extension Service managed to demonstrate improved methods of cultivation, the use of crop fertilizer and soil conservation methods. The distribution of superior hybrids and the more intensive education of farmers could be included. Location was, however, a critical factor, hence the lack of contact with the most remote farmers (compare map 3.1 with Appendix III).

The agricultural loans were offered especially to the small farmers to help them to break through the barrier of subsistence. Their need for education in basic concepts of better business were satisfied in many communities where village councils were organised (see discussion on amenities - Chapter V). The Extension Service, later in the Programme, established a pilot scheme of experimental farms in Waller Field. In addition, agricultural co-operatives grew out of the village councils' efforts.

In fisheries, the co-operative concept was more naturally adopted. Increased output by modernisation of the industry was not seriously considered in the Programme, however. The steps taken were, nevertheless, an important prerequisite toward possible modernisation. The experimental vessel completed

in 1962 was expensive, underlining the need for co-operative effort. Available loans were only adequate to assist village fishermen to acquire outboard motors. This simple step, however, increased the average catch by 50% in Puerto Rico, for example,⁹ while modern trawlers greatly multiplied fishing production in Peru.*

The Manufacturing Sector: Due to the long and arduous process of organising the I.D.C., early progress was slow. The Aid to Pioneer Industries Ordinance had been in operation since the early 1950's (see Chapter IV), and had been significantly expanded by 1958. The plans outlined by the Government, however, required a much better trained staff than was readily available. Moreover, the performance of the I.D.C. was crucial, in view of the questionable future of the petroleum industry.

Pioneer establishments brought a mixture of blessings and burdens to the economy. They were invited primarily to stimulate economic activity and to create employment opportunities. Some of the enterprises might have been established in the country, anyway, but the Government had to forgo the revenue it would have

*Following a U.N. appraisal of the country's fishing potential, a top official in the Department of Fisheries approached the Government with suggestions to expand the industry, but these suggestions were not taken seriously.

collected from these establishments by offering fringe benefits to attract all new industry (see Chapter IV). Such fringe benefits included tax holidays, duty-free imports of capital goods, import duties on competitive imports, and in some cases, guaranteed markets in order to protect certain new establishments in their early development.

The pioneer establishments were required, by I.D.C. regulations, to keep records of their business management, so that the I.D.C. could follow their progress. Many enterprises failed to keep any records at all, and the I.D.C. did not enforce the regulations.

The diplomatic inexperience of the I.D.C. staff was exploited in many other ways: Some firms automated their plants to a greater extent than had previously been agreed upon, employing less people. Others supplemented the normal labour force by employing women part-time in order to cut labour costs. Of those who used heavy machinery, some ordered extra machines, with the intention to use them in expansion after the tax-free import period had expired. Although investment of profits abroad was limited by law, many establishments created means whereby they could evade these restrictions.* Many of the enterprises devoted to producing

*Insurance companies invested a large percentage of their capital assets abroad. More subtle, however, was a chain of super-markets

import substitutes manufactured inferior quality products. The local population, however, is particularly prone to conspicuous consumption. Consequently, locally manufactured goods soon developed a derogatory reputation. Furthermore, many such firms were guaranteed a certain volume of local sales, and refused to expand beyond the guarantee, towards export.

The dilemma here depicts a profound conflict between the spirit of welfare economics and that of production economics. Furthermore, to put it crudely, the I.D.C. officials, trained as they were in the academics of capitalist machinery and committed to a welfare-oriented development programme, seemed virtually unprepared to operate in the ruthless arena of down-to-earth capitalism. In the primary sector, the conflict between the two forces of welfare and production economics involved a choice left entirely to the Government. In the manufacturing sector, however, the conflict presented an extremely delicate situation. The Government presented the country being greatly in need of capital investment either from local sources or from abroad. Being thus dependent, they became vulnerable to the self-interest of capitalistic enterprises. Indeed, such countries applying for foreign

which introduced "free" imported stamps to be exchanged for goods imported from its parent chain in the United States.

investment were regarded, in economic circles abroad, as "beggars",¹⁰ against which background it was considerably more difficult for the I.D.C. to assert a sense of dignity.

All enterprises, however, did not take undue advantage of the vulnerability of the I.D.C. Many (along with some of those who did take undue advantage) were an asset to the economic well-being of the country. The establishment of some firms created the need for other firms to expand production and for new firms to be established, for example, automobile assembly plants.

Tourism: Efforts in tourism did not show immediate results. By 1962, the Hilton Hotel had been completed, while smaller hotels and guest houses had been subsidised. Upon request for technical assistance, two United Nations experts from Switzerland were sent to evaluate the situation, following which they submitted a report in February, 1963.

In 1962, according to the report, Trinidad had 10 hotel establishments with total room-capacity of 738 rooms, and Tobago had 193 rooms in eight hotel establishments. In comparison to Trinidad and Tobago's 931 rooms, Barbados had 962 rooms in 36 establishments, Jamaica - 64 hotels with 2,935 rooms and Puerto Rico - 22 with 2,922 rooms. Table 7.3 hints at the fact that Trinidad and Tobago's expansion in tourism after 1958, like that of Bermuda,

was limited by a shortage of accommodation. As the U.N. experts pointed out, Trinidad and Tobago's shortage was, more specifically, one of the right type of accommodation. Formerly, most of the hotels were the "traditional" type, catering primarily to business travel. The Hilton Hotel, in contrast, served both this and the tourist function.

Table 7.3

Foreign Visitors in Selected West Indian Islands

	<u>number of foreign visitors</u>			<u>rate of increase</u>	
	<u>1951</u>	<u>1958</u>	<u>1960</u>	<u>1951/60</u>	<u>1958/60</u>
Barbados	20,747	24,945	35,535	70%	42%
Bermuda	88,026	130,821	151,402	72%	16%
Jamaica	n.a.	65,689	226,945	n.a.	245%
Puerto Rico	82,472	218,840	661,309	702%	202%
Trinidad and Tobago	31,924	154,566	196,104	514%	27%

Source: Krapf, K. and O. Michel, Tourism in Trinidad and Tobago. (Official-unpublished), 1963, p. 10.

The introduction of this new type of hotel had one immediate effect on the composition of foreign visitors. In 1960, 10% of the country's visitors were from the U.S. This is in sharp contrast to the other Caribbean islands, who averaged over 80% U.S. visitors for that year. Most of the other visitors to Trinidad and Tobago had come from other West Indian islands (44%)

Table 7.4

PASSENGERS ARRIVING AND DEPARTING BY AIR AND SEA, 1959 - 1963

COUNTRY OF ORIGIN / DESTINATION	Arrivals					Departures					Number
	1959	1960	1961	1962	1963	1959	1960	1961	1962	1963	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Total	198, 323	224, 941	215, 806	224, 744	213, 874	193, 478	225, 081	215, 413	222, 224	210, 790	
Temporary Halt Passengers and Refused Leave to Land	102, 799	122, 767	115, 227	119, 209	...	102, 799	122, 767	115, 227	119, 209	...	
Total (excluding Temporary Halt and passengers refused Leave to Land)	95, 524	102, 174	100, 579	105, 535	...	90, 679	102, 314	100, 186	103, 015	...	
THE WEST INDIES	39, 384	39, 129	40, 249	43, 323	...	33, 248	38, 302	38, 779	41, 331	...	
Antigua	1, 627	2, 135	2, 247	2, 920	...	1, 511	2, 019	2, 363	2, 976	...	
Barbados	13, 232	14, 927	14, 891	16, 506	...	12, 666	14, 804	15, 250	17, 001	...	
Dominica	160	191	316	397	...	80	88	123	275	...	
Grenada	13, 950	12, 476	12, 198	12, 177	...	10, 970	11, 914	11, 443	10, 979	...	
Jamaica	2, 252	2, 713	3, 286	3, 919	...	2, 649	3, 203	3, 740	3, 894	...	
Montserrat	71	44	43	51	...	157	106	179	341	...	
St. Kitts	20	35	111	317	...	69	24	10	188	...	
St. Lucia	1, 333	1, 344	1, 337	1, 230	...	1, 206	1, 516	1, 272	1, 224	...	
St. Vincent	6, 694	5, 264	5, 820	5, 806	...	3, 940	4, 628	4, 399	4, 453	...	
FOREIGN CARIBBEAN TERRITORIES AND CENTRAL AMERICA	9, 820	10, 842	9, 961	10, 919	...	9, 304	10, 639	10, 928	11, 042	...	
French Guiana	292	245	289	477	...	200	169	283	417	...	
Guadeloupe	267	306	310	441	...	307	258	357	422	...	
Martinique	1, 173	1, 472	1, 327	1, 169	...	1, 115	1, 431	1, 366	1, 364	...	
Netherland Antilles	3, 993	4, 570	4, 023	3, 867	...	3, 820	4, 327	4, 143	3, 909	...	
Surinam	1, 176	1, 034	1, 322	1, 671	...	895	920	1, 500	1, 144	...	
Panama	167	330	31	92	...	511	644	348	411	...	
Puerto Rico	2, 053	2, 292	2, 278	2, 826	...	1, 664	2, 033	2, 399	2, 912	...	
Other	609	593	381	376	...	792	857	532	463	...	
NORTH AMERICA	9, 930	11, 691	12, 898	15, 461	...	11, 372	14, 358	14, 656	16, 779	...	
Canada	1, 069	1, 153	1, 083	1, 367	...	1, 105	1, 130	1, 186	1, 761	...	
United States of America	8, 861	10, 538	11, 815	14, 094	...	10, 267	13, 228	13, 470	15, 018	...	
SOUTH AMERICA	29, 761	33, 695	28, 901	26, 888	...	27, 928	29, 101	24, 639	22, 854	...	
Argentina	599	542	689	533	...	580	515	701	460	...	
Brazil	2, 388	3, 926	3, 182	3, 216	...	1, 542	2, 133	1, 869	1, 837	...	
British Guiana	10, 037	13, 002	14, 237	13, 464	...	8, 903	10, 781	11, 644	10, 740	...	
Venezuela	16, 693	15, 999	10, 524	9, 468	...	16, 660	15, 390	10, 239	9, 610	...	
Other	44	226	269	207	...	243	282	186	207	...	
EUROPE	5, 832	6, 144	7, 265	7, 651	...	7, 922	9, 104	10, 572	9, 734	...	
United Kingdom	5, 602	5, 901	6, 884	7, 329	...	7, 099	8, 420	10, 401	9, 446	...	
Other	230	243	381	322	...	823	684	171	288	...	
REST OF THE WORLD	797	673	1, 305	1, 293	...	905	810	612	1, 275	...	

Source: Trinidad and Tobago. Central Statistical Office: Annual Statistical Digest, 1964,
p. 43.

and South America, (Venezuela - 16%, British Guiana - 13%, Brazil - 4%, and others - 2%).¹¹ Since then, however, the percentage of tourists from the U.S. has risen considerably, with the opening of the Hilton Hotel, while Venezuela's share has noticeably declined (see table 7.4).

The impact brought about by locals travelling abroad and by foreign visitors should now be examined. In Chapter IV, it was pointed out that the country had a favourable overall balance of trade in international travel of \$3.0Mn between 1951 and 1959. Between 1957 and 1963, however, there was a deficit of \$13.3Mn (see table 7.5 and Chapter IV).

Table 7.5

	<u>International Travel</u>						\$Mn
	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Expenditure	12.1	13.2	14.4	17.0	18.3	21.2	21.4
Revenue	12.1	13.7	14.8	15.3	14.7	16.1	18.1

Source: I.M.F. Report, Trinidad and Tobago. (Official-unpublished), 1965, p. 22.

Without exploring in detail the complexity of the economics of tourism, it should be pointed out that both Trinidad and Tobago have natural resource attraction for tourists which are of the same kinds (i.e. climate, topography etc.), as those being

exploited in other parts of the Caribbean and the Gulf of Mexico. Thus, there is little to give the islands any great natural relative advantage over neighbouring areas and, therefore, great demands are made on enterprise, organisation and technique.

NEEDS vs REALITY

In the previous section, the discussion attempted to introduce some of the basic conflicts faced by the planners of the First Five-Year Development Programme. Now that the complexities of the dilemma have been outlined, this section will summarise, in international perspective, the major issues that have been raised. The "needs" pertain to the aims of Trinidad and Tobago to achieve economic growth and development, whereas the "reality" is a comment on the international implications of localised desires, bearing in mind certain actual developments since 1962.

In view of the limited funds, only small successes could have been expected in some spheres of the Programme. In the struggle against unemployment, given the increasing tendency toward conspicuous consumption, activities of the labour unions and the expectations touched off by the Programme, the standard of living was forced upwards faster than economic growth. Furthermore, establishments soon opted to lay off portions of their labour force

as increased labour costs forced production costs upwards.* The acquisition of hire purchase terms became increasingly simple and served to meet the cost of expensive imported items. Bank and insurance loans and mortgages were also readily available.

The banks and insurance companies transferred large parts of their profits abroad. In effect, the population was living beyond its means, and the needs for local investment were not being met by the high per capita consumption (see table 7.6 below).

Consequently, the Government had to rely on international loans, which are both scarce and expensive. For example, before 1966, no loans were obtainable from the U.S. Only Canada and the U.K. supplied loans to Trinidad and Tobago: the former offered 50-year long-term loans at the remarkably low rate of three-quarter percent interest, while the latter made funds available at 6% interest - the regular going market rate. At 6% interest becomes 50% of the principal in 7 years, and equals the principal in 12 years. Large long-term loans were, therefore, prohibitive at that rate.

*Generally, management was not prepared to slow down the rate of increase in its already large profit-margin. Moreover, as managers learned new business techniques, they realised a need for a smaller labour supply. This phenomenon applied largely to retail commercial enterprises.

To help finance the Programme and other government transactions, deficit spending was increased from \$55.4Mn net public debt in 1957 to \$99.4Mn by the end of 1962,¹² although innovations were introduced to reduce borrowing.

Table 7.6

<u>Selected Countries</u>	<u>Gross Domestic Product</u> (per capita - \$U.S.)		(current prices) % Annual Increase <u>1953/59</u>
	<u>1953</u>	<u>1959</u>	
United States	2,079	2,484	3.0
Venezuela	749	1,098	6.6
United Kingdom	813	1,121	5.5
Netherlands	533	807	7.2
Puerto Rico	405	641	7.9
Trinidad and Tobago	330	568	9.5
Italy	353	524	6.8
Jamaica	202	354	9.8
Argentina	917	330	-

Source: United Nations Yearbook of National Accounts, 1962.

Moreover, there were major external forces working against economic development in Trinidad and Tobago - forces that would limit the scope of any small developing country to transcend mere token development. Over these, the country had no significant control. The dilemma of the I.D.C. is a case in point. A shortage of trained personnel and the relative incompetence of the Government Service culminated in limited results. The fact that, within the political machinery, the opposition was too weak and fragmented

to constructively challenge the Government, further limited the scope of leadership of the latter.

Put into an international perspective, such a dilemma takes on larger dimensions. The more efficient manufacturing techniques in many advanced countries have rendered them less dependent on the primary products and manufactured consumer goods of the developing countries. Furthermore, they may often export such products more cheaply than can smaller, less developed countries. Trinidad and Tobago, with its high labour costs, was especially vulnerable in this respect.

Nor can this dilemma be realistically divorced from the arena of international power politics. The world powers speak generously about aid to developing countries, but practically all aid is tied (as in Trinidad and Tobago). Very often loans have to be spent on "capital equipment supplied by the lending country".¹³

The possible self-interest of the donating country must also be considered when the recipient country evaluates advice given by experts who represent the government of that donating country. For example, a British Government expert sent from London in the early 1950's attempted to discourage the Trinidad and Tobago Government from establishing manufacturing industries. He had suggested that, in the future, Trinidad and Tobago could only achieve a lasting economic growth by expanding the export of

surpluses from the primary sector.*

When this sort of ill-advice comes from many different countries, affecting the planning of different sectors of the economy, suspicion builds up. In Trinidad and Tobago, other factors (e.g. the I.D.C. dilemma) fortified an emerging attitude which borders on prejudice against foreigners who suggest anything unusually optimistic.

This attitude is brought out in the Government's appraisal of the U.N. team's report on the country's fishing resources. The team reported on the migration patterns of three important species: Carite, King fish and Blue fish (see Chapter III), as well as the abundance of shrimp in the ocean around Trinidad and Tobago, crayfish in the rivers, turtles and lobsters. In accordance with this report, the Fisheries Department has cultivated lobster fishing grounds, (with species similar to those found off Australia, South Africa and Madagascar), and a marine-biological station was set up in Tobago. The station could incubate turtle eggs on the beach, and the turtles which, after hatching, would always return to their birth place to lay eggs, would be in constant supply. (Some turtles weigh up to about 5,000 lb.).

*From an interview with the economic advisor of the Ministry of Finance - Government of Trinidad and Tobago.

Tobago has, in recent years, been exporting flying fish to Malaya and Hong Kong for the making of fish sausages. This has been the direct result of the Extension Service in fisheries, as has been the education (wherever possible, given the shortage of advisory personnel) pertaining to the migratory customs of major species.

On the basis of the fishery resources already available off Trinidad and Tobago, it was estimated by the team that a fishing vessel, 60 to 80 feet long, equipped to stay at sea for about a week, could have caught fish in sufficiently large quantities so that every five men on board would have employed about 125 men on land. Thus, a landing market of the size recommended for Port-of-Spain could have employed (directly and indirectly) some 20,000. It would have resulted in considerable import substitution and would have provided a food source capable of further expansion. The initial capital outlay would have been large, and, partly owing to the shortage of funds, the petition for a landing market was not deemed clearly feasible. The fact, however, that the whole issue was not given serious consideration by the planning body could result in it being dropped completely, allowing no further consideration.*

*One of the few large natural resources available to Trinidad and

The developing countries who accept any form of loans or aid from the leading world powers find it difficult to be uncommitted in the "Cold War Struggle"; in the Western Hemisphere it has become virtually impossible. The former political leader of Guyana (then British Guiana) was conveniently ousted for supporting communist doctrine.* Furthermore, one becomes branded a communist, if he sympathises with any country that openly defies the United States Government.

Trinidad and Tobago, like most small developing countries, is highly dependent upon trade and, as a result, is dependent upon the current political and economic climate of the world. For example, the country's favourable balance of trade in the 1950's was largely in response to "the buoyant economic condition in the Western World".¹⁴ Within that period, the economy and its trade were affected by different world crises. The Korean War forced up trade prices of many primary commodities, affording

Tobago, therefore, remains relatively unexploited, while at the same time, the degree of sophistication of planning becomes greater. The fault lies neither wholly with the Government nor with the consultants, but results from the difficulties arising from a lack of economic and demographic freedom to manoeuvre, as well as from confusing socio-political attitudes.

*A London Times correspondent wrote a column (London Times, April 16th, 1967) explaining how the U.S. Central Intelligence Agency had infiltrated an election in British Guiana to produce the desired results.

favourable export prices for cocoa, coffee and citrus. The Suez crisis in 1956 caused the price of oil to rise, to the benefit of the Trinidad and Tobago economy. Conversely, the recession in the United States of America in 1958 caused a slight decline in the balance of trade for that year. Mr. Dudley Seers explains such behaviour as indicative of an "open economy".¹⁵

The vulnerability in terms of trade of such a small "open economy" must result in a vulnerable economy. Industrialisation is then looked upon as a means of fortifying a traditional primary sector which will remain extremely important. Moreover, due to the size of the local market and the often inferior quality of the manufactured consumer goods produced locally, most important industries have limited scope of expanding to support more than one establishment. Accordingly, monopolies develop in most facets of the manufacturing sector - a situation reminiscent of some of the larger economies of Central and South America, as well as in small-scale economies, such as that of Malta.

Positive steps have been taken within the Latin American region and the Caribbean region (jointly) towards solving some of the problems raised thus far. Before turning to these, however, a fundamental drawback needs to be defined. This has been the assumption (by newly-independent governments of Caribbean territories and advisors alike), that the former administrative structure

of the civil service would automatically be applicable to the forthcoming requirements of the independent country. For most countries, regardless of economic status, there is a margin of inefficiency within the implementation of plans by a given government office. Yet most governments in carrying out plans do not arrange safeguards against such inefficiency, and this often leads to otherwise unnecessary expenditure. (This is more the case in welfare planning than in development planning).

The structure of a civil service tends to resemble that of a military corps; where respect for senior officers is essential to its function. In the experience of Trinidad and Tobago and other West Indian islands, the attitudes of the local population are such that this respect virtually disappears.* Moreover, where a civil service union is established, the workers often become protected against most types of disciplinary action. It is in this type of public service administration that most workers develop a warped sense of values and take pride in achieving as little as possible.

Responsibility and competence suffer an even greater blow

*This attitude arises largely from the days of slavery and colonialisation when only those of Caucasian origin were treated with respect. Now that this ethnic strain has been replaced by other ethnic strains at many levels of leadership, the respect formerly afforded to that leadership has diminished greatly.

as corruption sets in. The islands of the West Indies constitute small communities in which "almost everyone knows you" and, in fundamental rural temperament, people do favours and expect favours to be done for them in return. Such attitudes inevitably lead to corruption at all levels.

A civil service operating under such internal pressures must function at a low efficiency rate, and labour costs must consume an exceptionally large portion of government expenditure. Thus, bearing in mind such structural deficiencies (which also occur in varying degrees in many South and Central American countries), one could adopt a more realistic perspective in evaluating the steps taken towards economic integration in this region.

During a conference in 1958, Latin American delegates were speculating and planning a regional market system (the Latin American Free Trade Association - LAFTA). Styled after the E.E.C., they were quite aware of the necessity to co-operate with one another, in order to reduce the preponderance of monopolies, and so increase the overall efficiency of the region. The trade in this bloc is significantly aligned with that of the U.S.A., owing to abundant United States private enterprise in these countries. Recently (since 1962), Trinidad and Tobago has been accepted into the bloc and, although progress has been slow in the early stages, the future of trade in the area is promising. Southern South

American countries can supply Trinidad and Tobago with most of its requirements for temperate food products, while the competition with other regional economies for the tropical products market would demand maximum productivity and quality standards.

The question of future political stability of the Latin American countries is timely and raises due concern. But, in recent years the political situation has tended to remain relatively stable as long as the economic situation has not become too burdensome to the local populace. In this sense, the interdependence of the entire region (including the West Indian countries who had economic links with them) was urgent. The adverse effect of the E.E.C. on the economy of LAFTA had been very noticeable,* and this had, at times, had political repercussions. The political structure of most countries significantly limited the scope of economic advancement at lower economic levels.** However, the development of this regional market and vigorous land reform programmes raised new

*e.g. exports from Argentina were most affected, since, unlike other Latin American countries, it did most trade with Europe and not with the U.S.A.

**Venezuela is one of the few Latin American countries in which the machinery of democracy has been made to work in spite of military crises, and, although the range of incomes remains very wide, there has been enough all-round economic activity in recent years to elevate the standard of living at all income levels.

(though vague) possibilities for more employment in the urban centres. Such land reform programmes would free the peasant farmers in most countries from the burden of perpetual debt and usher many into a new income bracket which allows saving and expansion. All this is possible, if the monopoly-prone economies could undergo the transformation foreseen by the 1958 conference. Thus, economic development may henceforth be regarded as attainable by using more economic and less political intervention.

The implications of such a development in the affairs of Latin America could be immense for Trinidad and Tobago. The expectations of the draft of the Development Programme indicated, hypothetically, that Trinidad and Tobago would have to realise less dependence upon advanced countries. However, given the size and nature of the economy, the experience of the first Development Programme indicated, quite emphatically, that the economy was likely to become significantly more dependent, in spite of economic planning. Accordingly, the entire future of LAFTA will be increasingly important to the country.

Conclusion: A free-trade association provides trade protection for its members and reduces the degree of vulnerability to international trade. It also imposes certain responsibilities which each member

must assume to ensure the success of the association. Being a community, the member nations would contribute goods and services, wherever possible, in order to implement total regional improvement. Similarly, within national and settlement entities, people need to realise that such co-operation leads to community development. Each person in the labour force, therefore, needs to be aware of his possible contribution to his community and the related economic implications. At this level of sophistication, the human resource base is capable of converting most of the physical resources into valuable assets.

Relating this to the experience of Trinidad and Tobago, many questions present themselves: Could the development of human resources keep pace with recent development of the GDP; how soon will education and training contribute significantly to the development of these resources; would population movement towards north-west Trinidad continue to cause rapidly growing urban unemployment and social unrest; would this unrest further restrict the scope of formal education as an aid to human resource development?

These and other questions are crucial to the type of economic planning needed for future development in Trinidad and Tobago. The answers, however, cannot be forthcoming without a geographical and historical appraisal of the available physical and

human resources, both in relation to each other and in the context of international influences. In other words, neither economic theory nor planning as an isolated contribution is adequate to meet the needs of a specific country, when taken out of the context of political, historical, cultural, sociological and other implications. Thus, the first Development Programme cannot be treated as a purely economic effort restricted to a specific time-period of 1958 to 1962. A historical and geographical approach is best suited to co-ordinate all impending factors, hence the importance of the geographer in specific economic planning.

FOOTNOTES TO CHAPTER VII

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APPENDIX I TO CHAPTER II

TRANSPORT AND COMMUNICATIONS

The development of the transport system in Trinidad and Tobago became increasingly important after World War II. There was little addition to the mileage of public roads (from 2409 miles in 1951 to 2527 miles in 1961), while the railway mileage actually decreased. The use of transport facilities increased at a remarkable rate, however, as more widespread use of road facilities had practically made the railway obsolete. Table I helps to point out the impact of post-war urbanisation on the transport system. Road traffic had trebled in volume between 1946 and 1957, expanding by a further 50% by 1962. In contrast, the use of the railway (which was always a government concern) had been declining. Despite the increase of passengers from 1954-1960, passenger revenue was relatively lessened. This factor reveals in part the increase in short distance commuting, countered by less long distance travel by rail, which is to be expected as a society becomes urbanised.¹ A comparison of the map below and Appendix III shows the extent to which railway mileage was reduced between 1950 and 1965.

TRINIDAD

NATIONAL PROGRAM

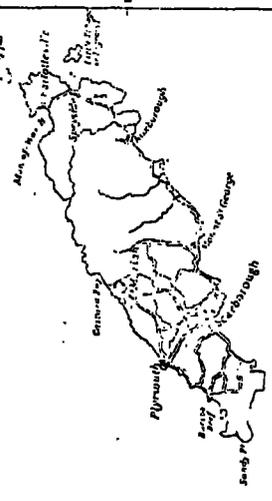
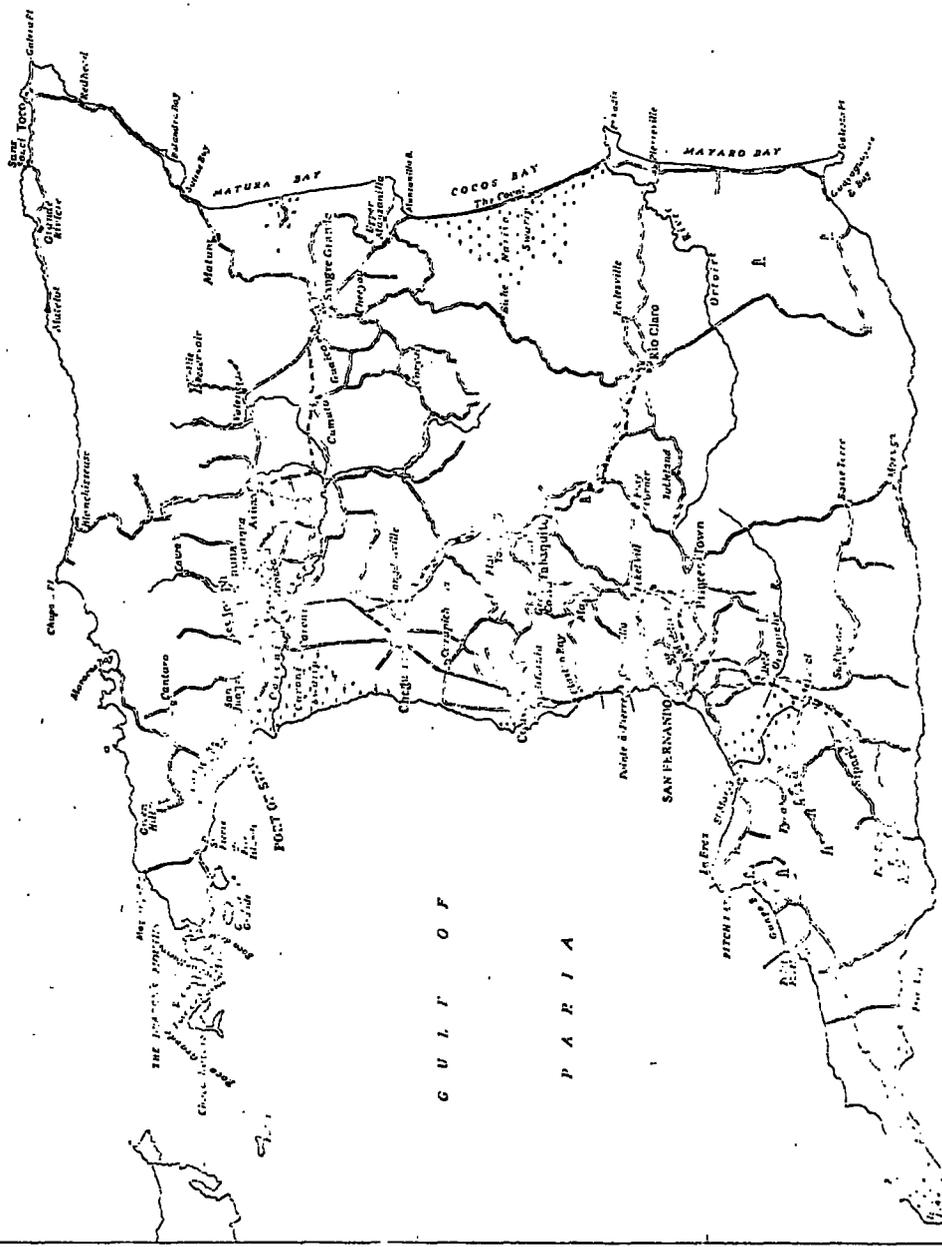


C A R I B B E A N S E A

A T L A N T I C
O C E A N

G U L F O F
P A R I A

- REFERENCE
- J.G. Railway
 - Roads
 - Oilfields
 - Oil Refineries



By 1955, the pressure of road traffic had become so great during the rush hours that railway transport was somewhat faster and more reliable for those who used public transport between San Juan and Port-of-Spain. But the revenue collected from passengers along the rest of the rail routes was extremely low. Along with the small volume of goods handled, the revenue collected by the railway had decreased from 32.6% of the expenditure of \$2.3 Mn in 1946 to about 8.3% of \$3.9 Mn in 1960 (see Table I). Had there been a line west of Port-of-Spain, the railway may have had more use, but this area had been developed along after the building of the rail system, and expansion costs had become prohibitive.

Although Trinidad and Tobago could boast more road mileage per person than Britain,² the road network was not adequate to meet the increased volume of traffic over the decade preceding 1958. The main roads had been decisive in the population build-up, especially in St. George and the other western counties. It is along these main roads that urbanisation continues most rapidly.

Table I helps to paint a vivid picture of what has been happening on the roads. Licensed vehicles trebled between 1946 and 1957, of which taxis increased about five-fold and private vehicles about three-and-a-half times. The bus service was also

Table 1Motor Vehicles Licensed and Registered

t End of	<u>Licensed</u>						Total	<u>Registered</u>
	Private	Hired & Rented	Omnibus	Goods Vehicles	Tractors & Trailers	Motor Cycles		
951	10,282	2,591	302	4,494	406	604	18,679	23,492
952	11,027	3,081	356	4,602	445	638	20,149	25,267
953	12,010	3,461	218	4,976	567	672	21,904	28,747
954	13,504	3,956	197	5,293	668	749	24,367	30,155
955	15,481	4,411	214	5,928	836	831	27,701	33,317
956	17,353	4,636	188	6,210	950	869	30,206	36,742
957	18,864	4,839	174	6,246	1,108	966	32,247	41,503
958	20,309	4,841	241	6,626	1,257	1,026	34,300	42,221
959	22,937	5,031	245	7,323	1,647	1,106	38,289	45,849
060	26,776	6,251	239	7,722	1,906	1,203	44,097	52,601

Source: Trinidad and Tobago. Central Statistical Office: Annual Statistical Digest, 1964, p. 104.

expanded, although the figure does not bring this out. The new buses were much larger, so that between 1953 and 1958, while the number licensed oscillated between 218 and 241, their carrying capacity increased from 6540 to 9249.³

Two of the most decisive factors in the expansion of road transport in both Trinidad and Tobago were the rise in the standard of living brought about by the development of the petroleum industry and the abundant supply of natural asphalt and quarried material. These industries will be discussed more fully later when we survey the industrial status of the country. Nevertheless, it should be noted here that local petroleum consumption increased markedly in postwar years, along with the use of asphalt and quarried limestone and gravel for road building and maintenance.

Not only did the Government railway suffer at the hands of the rapidly expanding use of road facilities, but port services did as well. The latter had been receiving "a sizeable subsidy to cover losses on its operations which include the running of coastal steamers,"⁴ operating mostly in the Gulf of Paria and between Port-of-Spain and Scarborough. The latter route was of extreme commercial importance to Tobago, but Plymouth, Roxborough, Charlotteville and Speyside, and Toco, Trinidad, were also engaged in local

trade. All Trinidad's ports, except Toco, are on the Gulf of Paria.

There was a growing use of air transport in Trinidad and Tobago, especially for business purposes. Piarco, the main airport, was the only one which handled major international flights. Crown Point in Tobago also handled a few minor international flights, but was used mostly as a link between Trinidad and Tobago. A number of the oilfields had small runways to accommodate light business aircrafts and private planes.

Public Transport Services: From 1946 to 1957 Trinidad and Tobago experienced a growing mobility of the population. The increase in passenger movement was greater than the net population growth. The rising living standards made possible (1) an extremely rapid expansion in the volume of private vehicles on the roads, (2) an even-higher growth rate of licensed taxis, (3) a correspondingly slow rate of increase in the use of buses, relative to net population growth, and (4) an actual decrease in the use of the passenger service provided by the railway. (5) The more widespread use of pedal- and motor-cycles further bore out the evidence of a trend towards increased reliance on private transport.

Just as different modes of transport could be identified,

so could different classes of commuters, although the two overlap. Commuters during the week could be divided mainly into worker, shoppers, and students; on weekends there would be a fourth and rather different type of travelling: recreational.

Regular working hours in Trinidad and Tobago were from 8 a.m. to 4 p.m., and the rush hours affected traffic in all the major urban areas. School hours varied somewhat, but most schools commenced classes at about 8.30 a.m., dismissed for lunch between 11.30 a.m. and 12.30 p.m., concluding classes at about 3.00 p.m. Accordingly the busiest hours on the roads were 7.00 a.m. to 8.45 a.m., 11.00 a.m. to 1.00 p.m., and 3.00 to 5.00 p.m. The intensification of traffic on the main roads during the rush hours signified a large rate of growth in school enrollment, a larger labour force with more job opportunities, and an "undisciplined use of the roads,"⁵ resulting in traffic congestion. The latter referred to the delivery of goods during peak hours in urban areas. When we discuss the Development Programme in detail later, we will learn about the Government's plans to alleviate such problems.

The means of public transport most used by school children were the railway and the bus services. The working population also used these services, but they travelled by taxi more frequently than

either, especially over longer distances, since taxis were a faster means of transport. They were, however, slightly more expensive, and most school children could not afford them.

Trinidad & Tobago's unique taxi service warrants explanation here. Apart from the conventional type of taxi service, which was used almost exclusively by tourists, the popular taxis were run rather like buses. "Licensed for five passengers only",* they ran on regular routes; they had standardised fares; and they stopped for passengers anywhere, so that a passenger normally did not have a choice of fellow travellers. In 1957, their fares were generally twice that of buses for the identical route.

Shoppers, who were comprised mainly of housewives, or their domestic aides, used public transport to a greater extent than either the commuting labour force or the travelling school children. This was because many families owned a car which took the children to school, and one or both parents to work. In 1958, very few families had two automobiles, so that whoever did the shopping during the week either walked, or used public conveyance.

On Saturdays and Sundays, both the nature and tempo of traffic were noticeably changed. On Saturday mornings, schools were not in session, so that students and teachers did not have to

* An inscription on the taxis.

travel early. Most shops and offices were open from eight to one o'clock, and this was the only time most teachers had to shop, except during their lunch hour. On this day, therefore, traffic was continuously heavy from about 7.00 a.m. to about 2.00 p.m., although not as heavy as during the weekday rush hour.

For the remainder of the weekend, traffic was moderate to light, except around market places on Sunday mornings from pre-dawn hours to about nine or ten o'clock. First the vendors prepared their stalls for the earliest customers who came as early as 4.00 a.m. The markets were busiest between about six and nine.

By 1957, the trend of increased recreational traffic was already well established. Trips to beaches, recreation parks, sports grounds, and other recreational sites were becoming more desirable. As a result, there was a growth in weekend road traffic proportionally greater than the growth of weekday traffic over the years. Another result was the increase in weekend traffic accidents. We will deal with traffic safety later in this Appendix.

We will now consider another aspect of non-recreational, long-distance travel on weekends. A growing number of workers and students worked or attended school too far away from home to commute daily. Such people would board near their job or school during the

week, and return home on as many weekends as possible. For those making such a trip between Trinidad and Tobago it was not very often, since air transport was rather expensive, and the weekend coastal steamer services was somewhat unreliable. The Development Programme had made plans for the re-organisation of the government operated coastal steamers - a topic for later discussion.

The internal transport of domestic and foreign produce was more dependent upon the roads than upon the water, railway or air services. The secondary road network was of great importance to farmers, especially the small holders. As will be seen in the Land Use survey, without these roads most farm produce would not get to the markets.

Road Network: Bridle paths are unpaved roads, or fairly wide paths which branch off from the secondary roads (and some main roads) into the interior. The bridle paths were not meant for motor traffic. They provided access to some settlements isolated from motorable roads, but more often they joined the interior farm lands to the motorways.

In the sugar-cane plantations, forests, and a few other plantation-type settings, there were numerous turf roads.* These often formed a network on the larger plantations and in the forest

* This refers to the passageways left between stands of forest, by woodcutters, to provide avenues whereby they would penetrate the

belts, and were used by animal- or motor-drawn carts to transport produce to a central point for easy collection. In the forests, lorries were being used increasingly in preference to carts for the transport of logs. The accessibility of these roads is invariably limited to dry or firm surface conditions.

Very seldom would a settlement be found equipped with a commercial enterprise, while lacking paved roads. In 1957, such a situation was less uncommon in Tobago. Consequently, paved roads, both primary and secondary, were the scene of certain types of traffic, to the exclusion of other types mentioned in the two previous paragraphs.

Paved roads had always been convenient for the swift movement of goods and passengers, while well-surface dirt or gravel roads were accessible for most of the year. It was on these two types of roads that most commercial transport took place. In the rural countryside, the roads were second and third class, both in Trinidad and Tobago. They were narrow and winding with both asphalt surfaced and dirt- or gravel-surfaced roads, being treacherous during much of the rainy season, especially in the hilly areas. In Tobago, a large proportion of the highways presented such conditions,

and were, accordingly, inadequate to supply many districts with certain basic services demanded in a developing society. Such inadequacies will be clarified in the survey of proposals for the Development Programme.

Traffic Safety: The railways were almost without exception the safest means of transport. Sea travel was also quite safe. It was road traffic that generally created most alarm among people, since the frequency of accidents is also apparent. The number of accidents on the roads almost doubled between 1951 and 1964 (see Table 2), but the increase by 1957 was about 25 to 30 percent. When considered in relation to the increased volume of traffic and pedestrians on the roads over the same period, one could conclude that traffic was becoming safer.* Traffic safety slogans and continuous road safety education in the schools were undoubtedly responsible, to a great extent, for the relatively low frequency of accidents. The high level of skill of the driving population was another factor to be considered.

* The writer taught at Cunupia Government Elementary School for 9 months in 1960. At least half of the 900 pupils walked along an extremely busy two-lane highway which had no pavements. Some of them walked for 1½ miles along this road; yet during his stay, there was not a single road accident involving a child.

Table 2

Persons Killed and Injured in Road Accidents

Year	Killed	Injured
1951	77	2,325
1952	85	1,854
1953	88	2,461
1954	91	2,621
1955	95	2,999
1956	93	2,850
1957	97	2,890
1958	112	3,238
1959	125	3,436
1960	141	4,204
1961	154	4,132
1962	137	3,669

Source: Trinidad and Tobago. Central Statistical Office: Annual Statistical Digest, 1964, p. 107.

Other Communication Facilities: Evidence of the population's rising living standards and greater economic activity are shown in Table 3. Note that the acquisition of telephones for both private and business uses increased much faster than the net population growth. The annual revenue collected grew more rapidly than the increase in the number of either private or business telephones, reflecting a greater expansion in business than in private use, as the former was more expensive to the user. In 1957, there were telephones in operation all over the territory, with pay telephone booths in or near police stations, warden's offices, or post offices in most rural districts. The use of telephones, however, was not widespread outside of the urban areas.

The postal service was quite well-equipped to distribute mail to the less-remote rural districts. Post offices had been built where there was a sufficiently large population to be served. In smaller settlements, a postal service would be installed in a private home or a local shop, for the sale of stamps and other minor services. A delivery service would take a postman within a certain radius of the post office. People living outside of this radius would have to collect mail at the post office. The speed and efficiency of the service was moderate, but occasional corruption within the

Table 3

COMMUNICATIONS
TABLE ON TELEPHONE SERVICES
INSTALLATIONS AND REVENUE FROM TOLLS

AT END OF YEAR	Number of Telephones installed			Revenue ¹ from Tolls \$
	Total	For Residential Use	For Commercial and Industrial Use	
	(1)	(2)	(3)	(4)
1940	7,164	2,554	4,610	70,202
1941	8,483	2,780	5,703	80,488
1942	9,361	2,842	6,519	93,873
1943	9,155	2,905	6,250	85,829
1944	9,678	3,070	6,608	86,738
1945	9,959	3,193	6,766	91,167
1946	10,442	3,456	6,986	104,171
1947	11,016	3,621	7,395	197,669
1948	12,216	4,170	8,046	207,574
1949	13,546	4,683	8,863	222,780
1950	14,794	5,372	9,422	245,184
1951	16,170	5,994	10,176	285,086
1952	17,585	6,664	10,921	326,201
1953	18,997	7,361	11,636	351,807
1954	20,973	8,243	12,730	400,821
1955	23,116	9,242	13,874	444,495
1956	25,431	10,283	15,148	523,746
1957	27,570	11,364	16,206	603,483
1958	30,331	12,536	17,795	672,895
1959	30,751	12,405	18,346	745,238
1960	30,872	12,398	18,474	477,843*
1961	31,631	12,596	19,035	692,963
1962	33,554	13,201	20,353	832,297
1963	35,060	13,666	21,394	918,333
1964	36,614	14,250	22,364	963,999

* Figure relates only to the period January to August, because of the workers strike which continued until the end of the year.

1. Includes Revenue from long distance calls made in Trinidad and Tobago only.

Source: Trinidad and Tobago. Central Statistical Office: Annual Statistical Digest, 1964

Table 4

Postal Services

	<u>Inland</u>	<u>Overseas Surface Mail</u>		<u>Overseas</u>
		<u>sent</u>	<u>received</u>	<u>Airmail</u>
1951	7,830	443	1,781	9,170
1952	6,837	436	2,111	11,509
1953	8,443	262	2,729	11,567
1954	7,852	233	2,930	11,858
1955	10,205	534	3,546	14,436
1956	10,268	534	3,614	14,720
1957	12,157	581	3,639	15,064
1958	12,317	581	4,093	16,709
1959	12,924	580	4,198	17,964
1960	14,254	606	4,462	17,987

Source: Trinidad and Tobago. Central Statistical Office:
Annual Statistical Digest, 1964, p. 117.

system did create problems. Nevertheless, the volume of inland mail handled increased at a faster rate than that of the population prior to 1957 (see Table 4).

Footnotes:

1. Bonavia, Michael R.: The Economics of Transport. (Cambridge, University Press, 1963), p.28
2. Trinidad and Tobago Government: First Five-Year Development Programme (1958-62). (Port-of-Spain, Government Printery, 1958), p.19.
3. Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). (Port-of-Spain, Government Printery, 1958), p.59.
4. Ibid., p.59.
5. Ibid., p.19

APPENDIX II TO CHAPTER III

LOCAL TRADE IN MARKET CENTRES

A very important aspect of agriculture and fisheries in the economic life of the local community often escapes observation: it is the role of the local market centre, which represents the chief means of trade for local primary produce. Actually, between 1953 and 1957, the value of local sales increased at a faster rate than did total agricultural sales (see table below).

Direction of Gross sales of Agriculture. (Current prices)

	<u>1953</u>		<u>1954</u>		<u>1955</u>		<u>1956</u>		<u>1957</u>	
	\$Mn	%								
Total	80.9	100	93.8	100	96.1	100	99.3	100	107.9	100
Local	30.2	37.3	35.5	37.8	41.7	43.4	47.3	47.6	54.2	50.2
Mfg.	35.3	43.6	38.0	40.5	38.3	39.9	35.6	35.9	40.5	37.5
Expt.	15.4	19.1	20.3	21.7	16.1	16.7	16.4	16.6	13.2	12.3

Source: . Trinidad and Tobago Government: Economic Survey of Trinidad and Tobago (1953-58). Port of Spain, (Government Printery), 1958. p.26

The increasing value of local sales was largely due to the fact that, during this period, retail prices grew by about 40%. Thus, at 1957 prices, the value of sales only improved from \$42Mn to \$54.2Mn.

The supply of local agricultural produce, i.e., fresh fruit, vegetable and ground provision (edible roots), was not keeping pace

with local demand. A closer examination of prices in local market centres reveals that those of ground provision and tomatoes were virtually doubled, whereas increases in fruit and fresh meat were as low as 10% in some cases. There is also the factor of the rapidly increasing supply of such produce in supermarkets. Hitherto a virtually non-existent section in supermarkets, the fruit and vegetable department became very important to shoppers. Refrigeration allowed these stores to keep produce for a somewhat-longer period than could market vendors. This had the two-fold effect of (1) reducing the aggregate supply at the market centre, thus taking advantage of the shortage, and (2) providing their customers with the convenience of not having to shop in two places. Thus, the supermarkets could charge higher prices for often-inferior produce.

Although not quite the social centres they were in Central America,* market centres in Trinidad & Tobago served a vital economic and social function in the local community. These centres were usually situated close to the junction of major routes.** Markets come under four main categories: (1) small and (2) large permanent markets housed under stalls in a fenced market place,

* In Costa Rica, for example, many market centres operate only on weekends, and the local population attaches much social significance to it. In some other countries religious festivals are often days for market meetings, (see Biesanz, J.: *Costa Rican Life*, New York, Columbia Univ. Press, 1946, p.159 and Whetten, N.: *Guatemala*, Yale Univ. Press, 1962, p.113.)

** Best examples of such market centres are found in Port-of-Spain, San Juan, Chaguanas, Marabella, Rio Claro, (see Appendix III).

(3) daily road-side markets on strategic routes and (4) periodical road-side markets which generally meet on weekends.

About 70,000 acres of land (some 16% of the agricultural land) was cultivated to supply the agricultural products for the local markets. These lands included much of the Caroni floodplain, plots within the sugar belt, as well as the alluvial valleys of both Trinidad and Tobago. Such lands were some of the most fertile in the country, but other less suitable land was also used for the same purpose. Special reference is made here to the steep slopes of the valleys near to Port-of-Spain and San Juan, upon which crops were raised. Some slopes were steeper than 45 degrees, and the soil erosion caused was detrimental, from the standpoint both of soil conservation and crop yield. However, the transportation of produce from these valleys to the urban markets was considerably cheaper, and the supply to retailers more reliable than what came from more remote areas. Moreover, wholesale prices were generally higher at the larger urban markets. Thus, the immediate disadvantages in cultivation were off-set in the short run.

Further from the urban areas, better land was cultivated. Greater emphasis was being placed on plantation-type agriculture, where plots were sufficiently large. There were, however, many small-holders who, like those with land close to the large market

centres, depended on the sale of fresh fruit, vegetable and ground provision for a livelihood. Such growers were most vulnerable to the inadequate transport available. Fortunately for some, they had their own means of transport to the market centres and some also their own produce. Many, however, had to rely on a "middleman" who purchased and collected their produce and took it to the market. These farmers, being at the mercy of the "middleman", were forced to part with their perishable goods at extremely low prices.

This phenomenon was probably the chief cause of under-employment in the agricultural sector in that small farmers, unable to bypass the "middleman", tended not to maximise production, but merely to produce as much as they expected to sell. Thus, these farmers had cut back production, and the rising retail prices had not been passed on to them. Instead, the prices on farms stayed at roughly the same level, or if they did rise, they did not keep pace with the rising cost of living, a comment on the distorted nature of local trade patterns and primary goods transport.

Soon after the termination of the Programme the Government Marketing Board began operating a collection service to off-set the exploitation of the "middleman", but it had not been adequately organised, and due to insufficient funds, could not supply the

necessary vehicles to cover the rural areas. Consequently, their collection was irregular and unreliable, although their prices were favourable. So the "middlemen" were supplied with an added threat to hold over the farmers.

Although some plantation farmers were also subject to "middlemen", they had security from other non-perishable crops, such as cocoa, coffee, coconuts, sugar-cane and citrus fruit. Moreover, farmers generally had so much produce that they had to arrange specially for a lorry to collect it. This way they could dictate reasonable prices. Cane farmers had a somewhat guaranteed market for their crop. The Citrus Growers Association had a well-organised collection service which offered the growers regulated prices. Thus, plantation owners, large and small alike, tended to be better off than the small-croppers, some of whom lived in desolate poverty.

The small peasant farmers and free-holders who cultivated land relatively near to the urban settlements generally benefitted from the Marketing Board's existing collection service. The Board had regularly-paid lorry drivers who went out weekly (in some cases semi-weekly) to collect produce. They bought at a guaranteed fixed rate and collected on a prescribed day. When this procedure was first implemented, the Board underestimated the volume of

produce waiting to be transported to the market. The lorries were accordingly filled to capacity before they had gone far along the routes prescribed, and farmers further along who had expected the service lost a great deal of capital through food spoilage. In response to the new collection system, a curious phenomenon developed. Many of these farmers had been getting higher prices in the urban markets than those offered by the Board. When the cost of transportation was considered, however, the total price paid to the farmers by the Board was higher, (transportation was free). For these farmers the greater cash-in-hand at the urban markets served as a greater incentive.

The Board also had quality standards, and produce that did not meet these standards were left behind. This was bought by "middlemen", (along with what had not been collected from the marginal farmers) at lower prices. Moreover, they would approach the marginal farmers on most routes, and since they (the farmers) could not be sure of having their goods collected. These would be bargained into accepting low prices to assure the farmer of having the produce sold.

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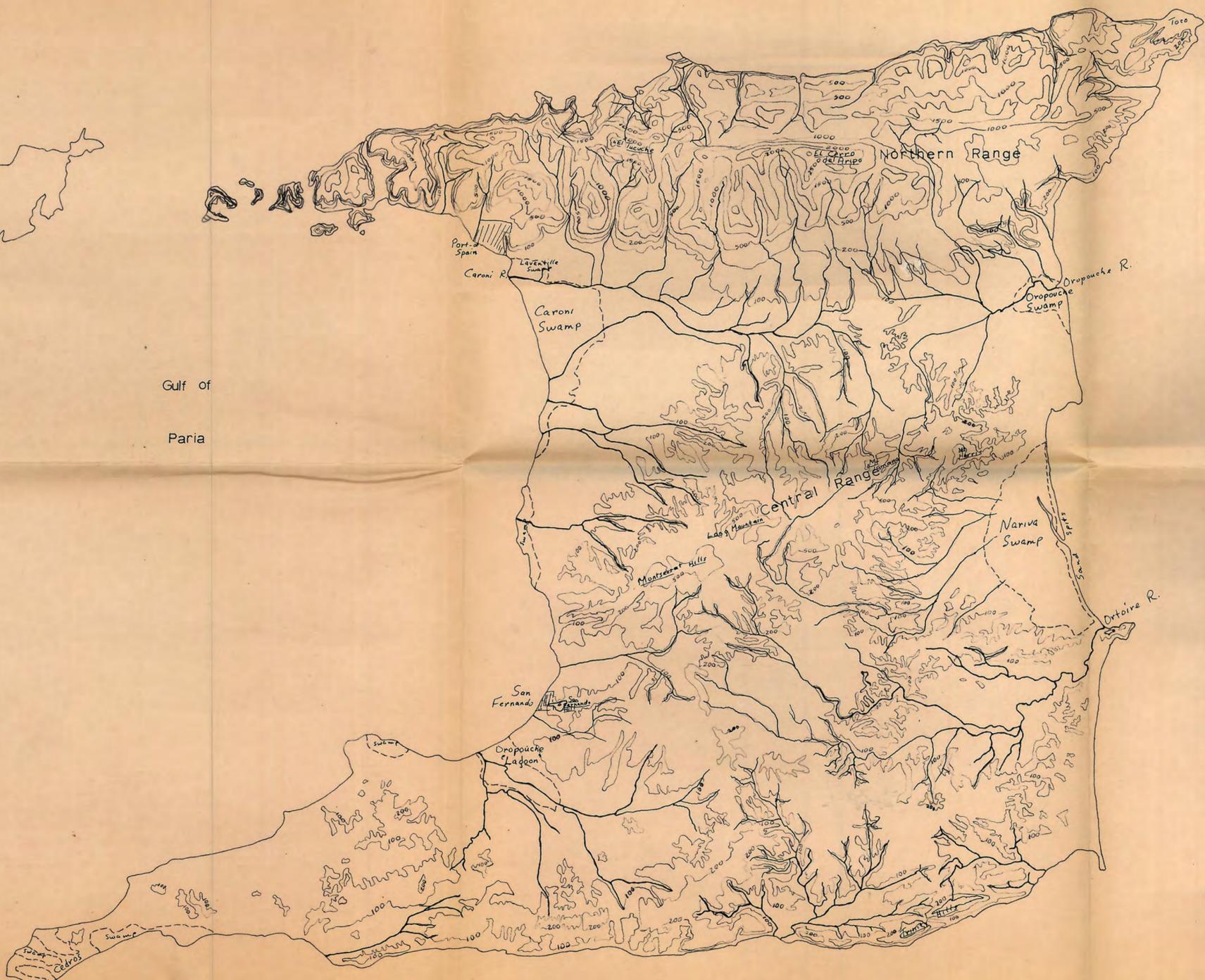
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Caribbean Sea



Gulf of Paria

Atlantic Ocean

Scale 1:300,000



Appendix III

COMMUNICATIONS NETWORK
OF
TRINIDAD

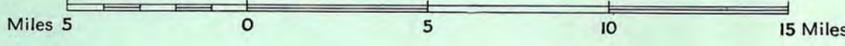


MAP OF TRINIDAD

SHOWING MOTOR ROADS AND OTHER MEANS OF COMMUNICATION



Scale 1:250,000



- Reference**
- Motor Roads
 - Beach Roads (Passable at Low Tide) and Projected Motor Roads
 - Important Private Motor Roads
 - Trinidad Government Railway
 - Gulf Launch Route
 - U. S. Leased Areas
 - County Boundaries
 - Ward Boundaries

Note: Important Private Motor Roads are shown for the convenience of Permit Holders, but the general public is not permitted to traverse Private Roads unless in possession of a Permit previously obtained.

*Only service available at time of publication is Passenger Service between Port-of-Spain and Arima. All other has been discontinued.

ERRATA
The above should now read "Between Port-of-Spain and Tunapuna" instead of between Port-of-Spain and Arima



West from 61°30' Greenwich