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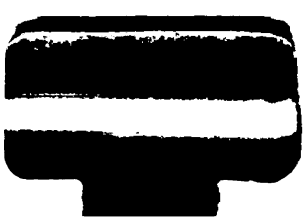

THE AGRICULTURAL SECTOR OF TRINIDAD AND TOBAGO

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The Trinidad and Tobago economy experienced very rapid growth in the post 1974 period, with measurable improvements in the standard of living. These developments were due to the performance of the petroleum sector. With a low price elasticity of demand for petroleum in most of the decade, purchasing power was transferred from the mature industrial countries to the oil-exporting countries, which provided the opportunity for economic transformation. This windfall led Trinidad and Tobago into a mix of policies including a degree of financial prudence and management, increased tax relief and welfare benefits, transfer payments and subsidization of the cost of living, increased aid to CARICOM and a public sector investment emphasizing energy-based industries, with a view to maximizing the use of the country's major natural resource. Gross Domestic Product (GDP) increased from 65.9 million in 1976 to 16.4 billion in 1984 ($TT).

Concurrently, there was marked expansion of social and physical infrastructure including health, education, water, electricity, transportation, communication and housing. The combined effect of these interacting factors has been that Trinidad and Tobago is rapidly becoming a more urbanized and industrialized society.

The transformation process has had both direct and indirect impact on agriculture. The creation of opportunities elsewhere in the economy for more attractive financial reward has diverted resources, including capital, arable land and productive labour, away from agriculture. Additionally, the demonstration effect of urbanization and industrialization has influenced the attitudes of the society, particularly the rural sector, towards agriculture, thereby accelerating the rural-urban drift. Further, taste and preference patterns have tended to become more metropolitan oriented, as evidenced by the composition and increasing volume of food imports.

The new National Alliance for Reconstruction (NAR) Government has placed agricultural development as one of the major areas for economic revitalization. The new Draft Agricultural Development Plan identifies the following as National Development Objectives for the sector:

.../// ...

1. Maximum degree of self-sufficiency in staple foodstuffs consistent with the natural resource endowment and the maximization of export income;

2. Promotion of national human resource development by means of an educational and training policy designed to equip the population to make the best use of the domestic natural resource endowment;

3. Increased incomes and employment from agricultural and agro-based activities;

4. Saving of foreign exchange by reduction of the food import bill and reduction of the import content of agricultural inputs, equipment and machinery;

5. Improvement in the level of services and amenities available in the rural areas so as to arrest the rural-urban drift;

6. Creation of a new sense of social appreciation for agriculture;

7. Protection, conservation and enhancement of the environment as well as the natural resource base for agriculture, forestry and fisheries and hence their capability to genrate increasing flows of physical and psychological outputs and incomes to our descendents in perpetuity.

Sector objectives are:

1. Increased domestic output of staple foodstuffs and raw materials for agro-processing;

2. Increase the productive flexibility of, and the quality of decision-making in the agricultural sector through appropriate policies and programmes of agricultural education, training and extension;

.../////...

3. Increased incomes from and employment in agriculture and agro-industries while reducing input costs;

4. Increase the utilization of local foodstuffs for processing on a cottage or large-scale industrial basis;

5. Reduce the import content of animal feeds formulations, requisites, equipment and machinery and other agricultural inputs;

6. Increase foreign exchange earnings from traditional and non-traditional agricultural commodities;

7. Increase the stability, regularity and output of domestic agricultural production through the provision of increased water control and improved marketing systems and infrastructure and a dynamic land policy.

This review of the sector which was financed by our Institute represents a situation study of the sector in 1987. I hope that the information provided will be useful for all those associated with the thrust in agricultural develop-]ment in Trinidad and Tobago

Chelston W.D. Brathwaite
IICA Representative in
Trinidad and Tobago

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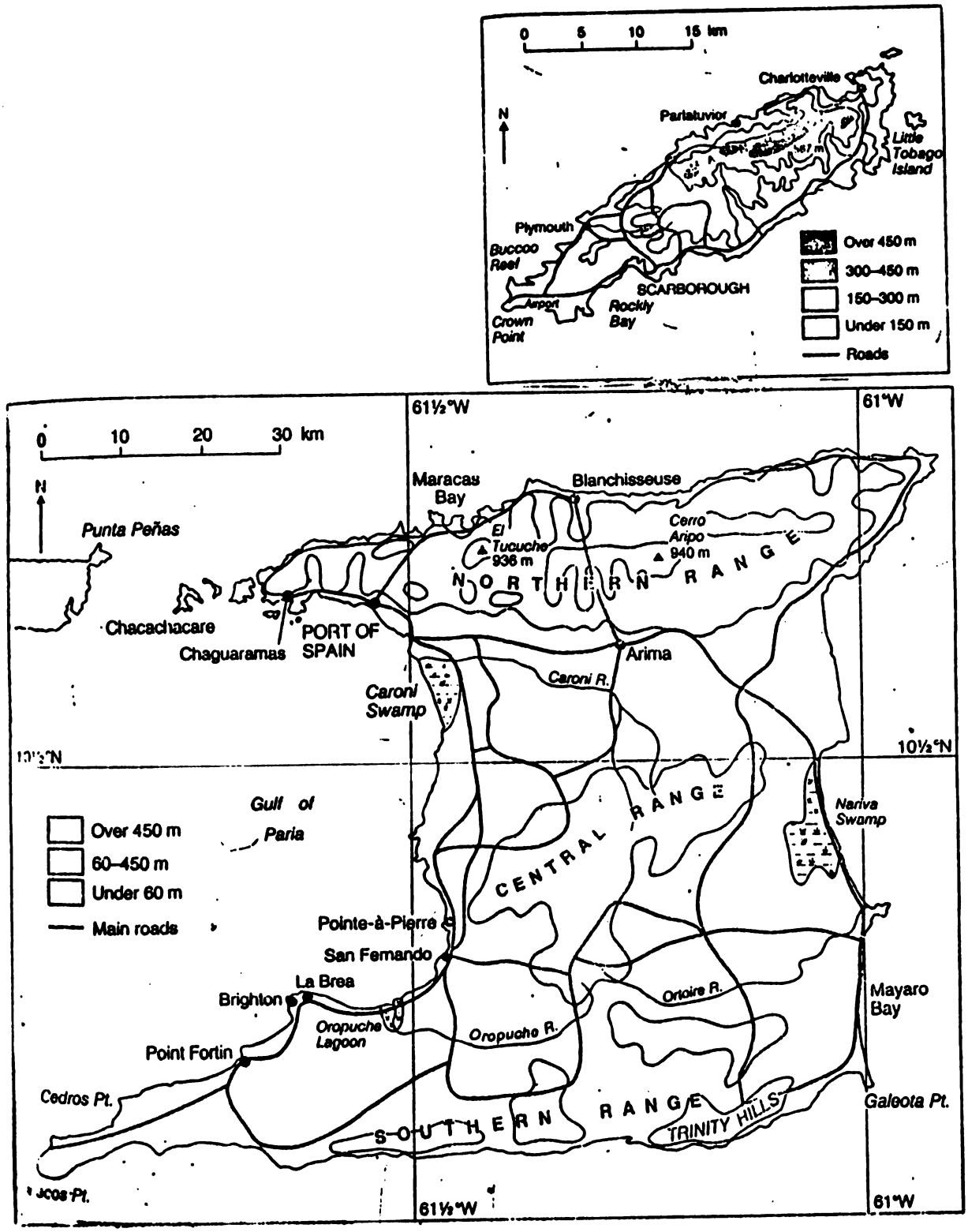

Source: Trinidad and Tobago - Physical
(from "Caribbean Lands" John Macpherson, Longmans Caribbean 1980)

PART A

BACKGROUND

CHAPTER ONE

I N T R O D U C T I O N

- THE LAND
- THE PEOPLE

THE LAND

Trinidad and Tobago is a twin island state that gained independence from Britain in 1962. The Islands are situated at the south-eastern end of the Caribbean Archipelago and at one point Trinidad is just seven miles from the South American continent. Trinidad, the larger island, is situated between ten and eleven degrees north latitude and a sixty-one and sixty-two degrees west longitude and has an area of 4,828 square kilometres. Tobago is centred at approximately latitude 11.5°N and longitude 60.5°W and has an area of 301 square kilometres.

Trinidad - Physical

The only true mountain system in Trinidad is the northern range, the highest peaks, El Tucuche and Cerro Aripo rise to 936 and 940 metres respectively. There is little coastal plain between the northern range and the sea. "The other two upland regions of Trinidad are unlike the Northern Range in that they slope gradually to the plains and present no great contrast with them. The Central Range is a broad highland mass running diagonally across the island from north-east to south-west and rising to little more than 300 metres. The Southern Range is lower still and much narrower, the highest peaks do not quite reach 300 metres"[1]. The Caroni Plains lie between the Northern and Central Ranges and fall gradually to the Caroni Swamp at its north-west corner. The Naparima and Nariva Plains lie between the Central and Southern Ranges.

Tobago - Physical

The main ridge of Tobago rises very steeply from the north coast to a maximum height of approximately 570 metres. The terrain falls to the south west to an extensive low land area.

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1 "Caribbean Lands" op cit p.65

Trinidad - Rainfall

Trinidad enjoys a high average annual rainfall. The highest rainfall (over 2,750 mm per annum) occurs on the highest eastern portions of the northern, central and southern ranges. The amount of rainfall falls off gradually from these points and the driest parts of Trinidad are the points to the south-west and north-west where the rainfall is lower than 1,750 mm per annum.

Tobago - Rainfall

Tobago has a pattern of rainfall suggested by the topography. Highest rainfall occurs on the summits and northern slopes of the main ridge where in places it exceeds 3,800 mm per year. The volume of rainfall deceases to the south-west which is in rain shadow and falls to as low as 1,000 mm per year.

Trinidad and Tobago have approximately the same distribution of rainfall over the year. The rainy season lasts from May/June to December/January and the dry season lasts from February to early May. Heaviest rainfall is experienced in June (up to 300 mm) and the lowest rainfall occurs in March (75mm).

Trinidad Soils

"The complex geology of Trinidad has given rise to a diversity of soils within short distances"[1]. The rocks of the Northern Range produce a shallow soil with deeper soil in the valleys. In the Caroni Plains there are fertile clays and larger areas of sands and gravels which are poor and of little use. The sands and clays of the Southern Range are not very fertile. Clays and rich deposits of silts are found on the Naparima Plains.

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[1] "Caribbean Lands" op cit p. 71

Tobago Soils

The igneous rock of Tobago weathers to form a fertile soil. The south-western plain consists of coral rock and water availability seriously affects agriculture production.

THE PEOPLE

The population of Trinidad and Tobago was estimated in 1985 at 1.2 million persons (Table 1.1). Density of population was highest in San Fernando (4,379 per square kilometre) and lowest in Nariva/Mayaro (34 per square kilometre). In general, high population densities were shown by the three population centres Port-of-Spain, San Fernando and Arima (Table 1.2). The overall sample average population density of Trinidad and Tobago was 211 persons per square kilometre.

The youthful nature of the distribution of the population by age is shown in (Table 1.3). Forty-five per cent of the population was under 19 years old and 34 per cent was under the age of 15 years. Six per cent of the population was over 65 years.

The number of unemployed persons fell from 51,900 (14 per cent of the labour force) in 1973 to 49,100 (11 per cent of the labour force) in 1983 (Table 1.1). There has been a steady increase in unemployment since 1983 however and in 1986 78,000 persons or 15 per cent of the labour force were unemployed. It is interesting to note that the size of the labour force fell from 470,900 persons in 1984 to 463,200 persons in 1985. "This decline occurred principally within the 15-19 and 20-24 age groups and probably reflects a growing reluctance on the part of new entrants to the labour force as well as retrenched workers to pursue employment opportunities in the light of the reduced capacity of the economy to create jobs"[1].

Reduced employment opportunities and the reaction of the labour force are reflected in Table 1.4. The data shows a widespread decline in the number of persons employed.

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1 Review of the Economy op cit 1975, 1985, 1986

POPULATION, LABOUR FORCE AND EMPLOYMENT

TABLE 1.1

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	1978	1983	1984	1985	1986
Non-Institutional Population	1,061.8	1,149.3	1,168.2	1,176.1	1,195.5
Labour Force	376.0	442.5	470.9	463.2	471.2
Unemployed	51.9	49.1	60.4	70.7	78.0
Unemployment Rate (Percent)	14.0	11.1	12.8	15.3	16.0

Source: Review of the Economy op cit 1975, 1985, 1986

POPULATION DENSITY - TRINIDAD AND TOBAGO 1985

TABLE 1.2

	Persons per sq. kilometre
Port-of-Spain	5,618
San Fernando	4,379
Arima (Borough)	9,479
St George	421
Caroni	256
Nariva/Mayaro	34
St Andrew/St David	54
Victoria	233
St Patrick	185
Tobago	134
Trinidad and Tobago	211

Source: Annual Statistical Digest
Central Statistical Office, Trinidad and Tobago 1985 P.1

POPULATION BY AGE

TABLE 1.3

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AGE GROUP	000	%
Under 15	405.1	34.4
15 - 19	123.4	10.5
20 - 24	123.3	10.5
25 - 29	99.9	8.5
30 - 34	80.8	6.9
35 - 39	72.0	6.1
40 - 44	57.2	4.9
45 - 49	47.6	4.0
50 - 54	42.3	3.6
55 - 59	29.1	2.5
60 - 64	26.6	2.3
65 and Over	68.8	5.8
TOTAL	1,176.1	100.0

Source: Review of the Economy op cit 1985 p. 89

LABOUR FORCE BY INDUSTRY

TABLE 1.4

	1984 No. Employed	1985 No. Employed	% Change 1984/1985
Sugar	12.3	11.1	- 9.8
Other Agriculture	30.1	34.9	15.9
Crude Oil and Natural Gas	5.5	5.1	- 7.3
Oil Refining	4.9	4.1	-16.3
Service Contractors	4.3	3.6	-16.3
Other Mining and Quarrying	.7	.3	-57.1
Distribution and Hotels	73.5	69.6	- 5.3
Manufacturing	50.1	45.0	-10.2
Electricity, Gas and Water	7.9	8.3	5.1
Construction	69.1	59.0	-14.6
Transport and Allied Services	27.2	24.4	-10.3
Communication	5.1	4.8	- 5.9
Financial Intermediaries	12.5	11.3	- 9.6
Public Admin and Defence	25.9	26.5	2.3
Education and Research	18.8	20.5	9.0
Medical and health	16.0	14.7	- 8.1
Other Services and Commodities[3]	46.8	48.5	3.6
Others[4]	-	.3	-
TOTAL ALL INDUSTRIES	410.7	392.0	- 4.6

Source: Review of the Economy op cit 1985 P. 93

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3 Includes Sanitary personnel, Household and other Services and Commodities.

4 Includes other seekers, never worked, not stated and not described.

CHAPTER TWO

ECONOMIC OVERVIEW

- HIGHLIGHTS OF THE PERIOD 1970 TO 1978
- THE ECONOMY 1978 TO 1986

HIGHLIGHTS OF THE PERIOD 1970 TO 1978

Petroleum Resources

Trinidad and Tobago has been a producer of petroleum for more than a century the first successful oil well being drilled in 1857. Twelve oil fields have been discovered in the south-west and two in the south-east.

Production of crude petroleum had started to peter-out by 1968, at the same time however, off-shore extraction proved successful and production increased annually up to 1978. In 1975 production was equal to 200,000 barrels per day with 75 per cent coming from off-shore wells which provided a high-grade, low sulphur crude. Efforts were being made at the end of the period to increase the level of on-shore exploration/production.

Trinidad and Tobago possess large reserves of natural gas which is used increasingly as a raw material and for the generation of electricity.

Gross Domestic Product (GDP)

The GDP of Trinidad and Tobago showed growth in money terms in every year between 1970 and 1978 to reach $8.2 billion in 1978. Growth in real terms reached a high of 10.5 per cent in 1976 but tapered off to 6.1 per cent in 1978.

The primary sector was increasingly dominated by petroleum production over the period 1970 to 1978 partly because of increased production of crude oil but also because of reduced production in agriculture. In 1970 petroleu mining accounted for 62.1 per cent of the value of the production of the primary sector; by 1978 this had increased to 92.7 per cent.

The importance of the petroleum sub-sector to the economy changed slightly over the period. Table 2.1 shows that petroleum accounted for 78 per cent of export earnings in 1960. The share of petroleum rose to 91.6 per cent in 1977 and fell to 89.3 per cent in 1978. The petroleum sector thus

declined slightly in importance between 1976 and 1978 and much of the decline in the rate of real growth in GDP in that period may be attributed to that factor.

The record of sectoral contributions is outlined in Table 2.2 which shows the relative growth in importance of the primary sector over the period 1970 to 1975 and the relative decline of that sector against the tertiary sector from 1975 to 1978. This phenomenon was due to negative growth in the petroleum sub-sector over the period and to simultaneous petroleum-fuelled expansion in the tertiary sector.

The Secondary sector was characterised by two significant trends; the decline in the importance of the manufacturing sub-sector (which includes petroleum refining and sugar production) and the rise of the construction sub-sector. The steady decline in the manufacturing sub-sector coincides with a steady decline in refinery through-put.

The picture that emerged at the end of the period was of fluctuating levels of performance of the petroleum sub-sector and strong growth by petroleum-fuelled construction and services.

Overseas Trade and Balance of Visible Trade

Trinidad and Tobago experienced increasing imports and stagnating exports over the period 1970 to 1972 in which the balance of visible trade was minus $399.2 million. The pivotal year was 1973. In that year, the increase in the value of exports was greater than the increase in the value of imports and the value of the deficit was reduced to minus $188.6 million.

EXPORTS BY COMMODITY SECTION AS A PERCENTAGE OF TOTAL EXPORTS

TABLE 2.1

	1970	1976	1977	1978
Food and Live Animals	8.0	3.5	3.1	2.8
Mineral Fuels	78.0	90.7	91.6	89.3
Chemicals	8.0	2.8	2.9	4.2
Manufactured Goods	2.0	0.7	0.7	0.7

Source: "Review of the Economy" op cit 1977, 1978, 1979.

A surplus of $387.9 million was achieved in 1974 and reached $873.0 million in 1977. In 1978 the balance of visible trade fell sharply to $174.2 million, the result largely in reduced earnings by the petroleum sector.

PERCENTAGE SECTORAL CONTRIBUTION TO GROSS NATIONAL PRODUCT (CURRENT PRICES) TRINIDAD AND TOBAGO SELECTED YEARS[1]

TABLE 2.2

	1970	1975	1977	1978
Primary Sector	12.9	43.3	42.5	38.5
Secondary Sector	31.5	20.7	20.4	20.6
Tertiary Sector	55.6	36.0	37.1	40.9

Source: 1 "The Agricultural Sector of Trinidad and Tobago" Byron Noble 1981.

THE ECONOMY 1978 to 1986

(a) Gross Domestic Product

The period 1978 to 1986 naturally divides into two sub-periods, strong economic growth over 1978 to 1982 contrasts with decline since then. Gross Domestic Product (current prices) registered a growth rate of 32.9 per cent over 1978/79 and 42.6 per cent over 1979/80 (Table 2.3). The value of Gross Domestic Product (current prices) peaked at $20,153.0 million in 1982 (Table 2.4). Growth in real terms (constant 1970 prices) was less spectacular and averaged 5.9 per cent over the period 1979 to 1982. There was positive growth in every year over the period.

The sub-period up to 1982 was marked by strong growth in the secondary and tertiary sectors especially in construction, electricity, water and transport. The primary sector by comparison showed poor performance with only domestic agriculture achieving positive growth over the latter part of the period.

The sub-period since 1982 has displayed a change from the pattern of variable but always positive growth. The value of Gross Domestic Product (current prices) fell by minus 1.6 per cent, minus 0.5 per cent, minus 3.5 per cent and minus 8.1 in 1983, 1984, 1985 and 1986 respectively, and amounted to $17,391.9 million in 1986. Declines were registered by most sub-sectors except agriculture which continued to achieve growth rates of over 10 per cent.

In real terms, the petroleum-propelled secondary and tertiary sectors showed declines in almost all sub-sectors (Table 2.5). In the primary sector, positive growth rates were maintained by domestic agriculture and the petroleum sub-sector which achieved an average growth rate of 8.8 per cent over 1983/85 with a small decline over 1985/86. Good performance by export agriculture resulted in positive growth in total agriculture. The sugar sub-sector which was marked by declines over most of the period somehow managed to achieve positive growth in 1985 and 1986.[1]

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1 A detailed analysis of the agricultural sector will be presented in Chapter 4.

GROSS DOMESTIC PRODUCT AT FACTORY COST (CURRENT PRICES) GROWTH RATES

PERCENTAGE CHANGE

TABLE 2.3

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/
Agriculture	22.8	24.2	19.5	17.6	6.5	0.1	9.9	33.4	10.1	6.4	1.2	7.7
Petroleum Mining, Asphalt and Quarrying	28.3	8.5	22.1	-6.3	48.9	75.2	-4.3	-4.1	-14.1	10.1	-1.9	-24.8
Manufacturing, including Sugar and Petro Chemicals	18.9	12.8	16.0	7.8	17.8	19.4	-9.7	-13.5	21.3	-1.0	11.7	12.8
Electricity and Water	31.1	9.6	28.3	36.3	23.9	26.9	34.8	39.5	-1.9	3.5	4.9	-3.3
Construction	47.1	24.8	35.2	18.7	18.0	43.8	31.7	67.4	-7.0	11.4	-22.0	-15.7
Distribution	23.3	14.3	16.7	22.8	21.6	28.4	15.4	9.7	6.7	-17.4	-6.3	-10.7
Transport, Storage and Communication	16.3	37.3	39.2	6.8	46.9	47.1	5.2	9.4	7.7	-20.4	2.1	2.5
Finance, Insurance Real Estate	23,7	19.4	37.1	15.7	33.9	28.3	22.7	20.5	16.0	-1.1	12.5	-6.9
Government	41.6	10.1	20.9	21.5	45.4	10.2	28.7	90.1	-8.7	2.3	2.6	4.9
Others	20.1	19.1	28.4	22.6	11.2	26.5	20.4	64.8	5.9	Ø	Ø	Ø
Gross Domestic Product	26.6	15.1	24.5	8.8	32.9	42.6	7.5	20.9	-1.6	-2.8	-1.6	-8.1

Source: "Review of the Economy" op cit 1986 Appendix 23

GROSS DOMESTIC PRODUCT AT FACTOR COST (CURRENT PRICES) SELECTED YEARS $ MILLION

TABLE 2.4

	1970	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	198
Agriculture	79.8	141.0	173.2	215.2	257.1	302.3	322.1	322.3	354.1	472.4	814.6	867.0	877.1	944
Petroleum, Asphalt, Quarrying	130.7	1,419.1	1,820.6	1,976.1	2,413.5	2,260.5	3,364.9	5,896.9	5,642.7	5,411.1	4,486.8	4,939.8	4,847.0	3,645
Manufacturing including petroleum and sugar refining and Petrochemicals	368.4	621.9	739.2	834.1	967.5	1,043.1	1,228.8	1,466.9	1,324.8	1,145.5	1,447.7	1,433.2	1,265.2	1,427
Electricity and Water	32.2	51.1	67.0	73.4	94.2	128.4	159.1	201.9	272.1	379.6	372.3	385.4	404.4	390
Construction	113.4	263.3	387.4	483.4	653.6	775.8	915.6	1,316.3	1,733.7	2,902.3	2,698.4	2,390.6	1,864.3	1,571
Distribution	282.8	489.7	614.8	702.5	819.6	1,006.3	1,223.9	1,571.2	1,812.5	1,988.3	1,592.7	1,315.3	1,232.8	1,100
Transport, Storage, Communication	239.6	360.3	419.0	575.2	800.7	854.8	1,255.8	1,847.2	1,942.7	2,125.3	2,819.8	2,245.4	2,293.5	2,236
Finance Insurance, Real Estate	138.9	257.7	318.8	380.8	522.2	604.0	808.7	1,037.9	1,273.9	1,535.4	2,341.7	2,316.4	2,606.4	2,427
Government	136.6	319.6	452.5	498.0	602.1	731.4	1,063.6	1,172.4	1,508.5	2,808.2	2,615.7	2,675.4	2,745.4	2,880
Others	108.5	210.9	253.3	301.6	387.3	475.0	528.3	668.1	804.1	1,324.9	1,340.3	1,435.2	1,509.5	1,570
TOTAL GDP	1,630.9	4,143.6	5,245.9	6,040.3	7,517.8	8,181.6	10,870.8	15,501.1	16,669.1	20,153.0	19,783.4	19,226.1	18,921.8	17,391

Source: Review of the Economy op cit 1983, 1986 - Appendix 22

GROSS DOMESTIC PRODUCT AT FACTOR COST CURRENT PRICES) SELECTED YEARS $ MILLION

TABLE 2.4

	1970	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
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Petroleum, Asphalt, Quarrying	130.7	1,419.1	1,820.6	1,976.1	2,413.5	2,260.5	3,364.9	5,896.9	5,642.7	5,411.1	4,486.8	4,939.8	4,847.0	3,645
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Electricity and Water	32.2	51.1	67.0	73.4	94.2	128.4	159.1	201.9	272.1	379.6	372.3	385.4	404.4	390
Construction	113.4	263.3	387.4	483.4	653.6	775.8	915.6	1,316.3	1,733.7	2,902.3	2,698.4	2,390.6	1,864.3	1,571
Distribution	282.8	489.7	614.8	702.5	819.6	1,006.3	1,223.9	1,571.2	1,812.5	1,988.3	1,592.7	1,315.3	1,232.8	1,100
Transport, Storage, Communication	239.6	360.3	419.0	575.2	800.7	854.8	1,255.8	1,847.2	1,942.7	2,125.3	2,819.8	2,245.4	2,293.5	2,236
Finance Insurance, Real Estate	138.9	257.7	318.8	380.8	522.2	604.0	808.7	1,037.9	1,273.9	1,535.4	2,341.7	2,316.4	2,606.4	2,427
Government	136.6	319.6	452.5	498.0	602.1	731.4	1,063.6	1,172.4	1,508.5	2,808.2	2,615.7	2,675.4	2,745.4	2,880
Others	108.5	210.9	253.3	301.6	387.3	475.0	528.3	668.1	804.1	1,324.9	1,340.3	1,435.2	1,509.5	1,570
TOTAL GDP	1,630.9	4,143.6	5,245.9	6,040.3	7,517.8	8,181.6	10,870.8	15,501.1	16,669.1	20,153.0	19,783.4	19,226.1	18,921.8	17,391

Source: Review of the Economy op cit 1983, 1986 - Appendix 22

GROSS DOMESTIC PRODUCT AT FACTOR COST (CONSTANT 1970 PRICES) GROWTH RATES (PERCENTAGES)

TABLE 2.5

	1979/80	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86
Total Agriculture	- 7.6	- 3.2	4.4	- 2.4	- 0.8	5.1	2.5
- Total Export Agriculture	-11.5	9.2	-12.0	-13.7	-10.2	34.0	-14.1
- Sugar	-14.2	-12.5	1.0	- 7.6	- 4.7	1.1	6.1
- Domestic Agrieulture	- 3.5	2.0	9.9	2.8	2.8	4.0	3.0
Petroleum	- 2.5	-12.1	0.2	- 8.5	10.2	11.3	- 0.7
Manufacturing	7.1	- 1.4	0.5	- 1.0	-13.0	-14.3	5.3
Electricity and Water	12.0	2.3	17.9	7.4	4.2	1.6	3.9
Construction and Quarrying	23.0	7.6	4.1	-12.3	-19.7	-23.9	-18.4
Distribution Services and Restaurants	8.7	6.1	5.4	-12.6	-27.1	-13.0	-16.9
Hotels and Guest Houses	4.9	5.2	- 5.9	2.1	-13.2	- 5.1	5.3
Transport, Storage and Communication	11.6	9.8	17.3	- 8.1	-24.6	- 1.2	- 7.0
Finance, Insurance and Real Estate	9.2	1.9	22.8	1.7	-11.5	4.5	-13.3
Government	4.7	11.4	- 4.0	- 0.6	- 1.7	- 3.4	1.6
Education, Culture, Community Services	6.8	0.7	1.1	- 2.3	1.4	2.3	- 4.3
Personal Services	2.0	7.1	- 8.5	- 2.7	1.1	2.0	- 0.4
TOTAL GDP	7.6	3.4	6.7	- 6.0	-12.8	- 2.9	- 6.4

Review of the Economy op cit 1985

The observation was made in Chapter I that reduced opportunities in the prime sectors - sugar, oil and construction, have resulted in withdrawal by some persons from the labour force or the seeking of new opportunities in agriculture (other than sugar) or the Government Service. The data on Gross Domestic Product by sub-sector, seems to support this thesis. The vigorous and sustained growth displayed by domestic agriculture seems to suggest the impact of new recruits to domestic agriculture, largely market-gardening.

In relative terms however, the agricultural sector continues to play a minor role in the Gross Domestic Product, amounting to $944.9 million or just 5.4 per cent of total Gross Domestic Product of $17,391.9 million in 1986 (Table 2.6). Over the period 1978 to 1986 the relative contribution of agriculture increased from a low of 2.0 per cent in 1980 to attain, in 1986 the highest level yet of 5.4 per cent (Table 2.6). It should be noted however, that there was considerable expansion in the value of agricultural production from $79.8 million in 1970 to $944.9 million in 1986. This expansion was however not reflected in relative contribution until later in the period because of the more rapid expansion of the petroleum sector up to 1982.

The shifts in the relative contribution of the various sub-sectors since 1980 as indicated in Table 2.6 have not affected the fundamental structure of the economy that emerged in 1974. The petroleum sector which contributed 8.0 per cent of Gross Domestic Product in 1970 contributed 34.2 per cent in 1974. This relative importance has been maintained despite recent declines in production and petroleum remains the single most important sub-sector contributing 21 per cent of GDP in 1986.

The importance of the petroleum sub-sector is underlined by study of the "Total Domestic Exports of Trinidad and Tobago" (Table 2.7). The value of petroleum exports: $813.0 million in 1970 soared to $8,369.3 million in 1981 by which time it amounted to 96.0 per cent of total domestic exports.

The value of exports of petroleum products has declined in recent years to $4,800 million in 1986 but this still accounts for 95 per cent of Domestic exports. A review of the economy of Trinidad and Tobago must therefore examine the performance of the petroleum sub-sector in some detail.

SECTORAL CONTRIBUTION TO GDP AT FACTOR COST (CURRENT PRICES) PERCENTAGE

TABLE 2.6

	1970	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	19
Agriculture	4.8	3.4	3.3	3.6	3.4	3.7	3.0	2.0	2.1	2.3	4.1	4.5	4.6	5
Petroleum Mining Asphalt, Quarrying	8.0	34.2	34.7	32.7	32.0	27.6	31.0	38.1	33.8	26.1	22.7	25.7	25.6	21
Manufacturing, Sugar Petro-chemicals	22.7	15.0	14.1	13.8	12.9	12.7	11.1	9.5	7.9	8.1	7.3	7.5	6.7	8
Electricity & Water	2.0	1.2	1.3	1.2	1.3	1.6	1.5	1.3	1.6	1.6	1.9	2.0	2.1	2
Construction	7.1	6.4	7.4	8.0	8.7	9.5	8.4	8.5	10.7	10.5	13.6	12.4	9.9	9
Distribution	17.4	12.0	11.7	11.6	10.6	12.3	11.3	10.1	10.9	11.7	8.1	6.8	6.5	6
Transport, Storage Communication	14.6	8.7	8.0	9.5	10.7	10.4	11.6	11.9	11.6	12.3	14.3	11.7	12.1	12
Finance, Insurance Real Estate	8.3	6.2	6.1	6.3	6.9	7.4	7.4	6.7	7.6	8.5	11.8	12.0	13.8	14
Government	8.4	7.7	8.6	8.2	8.0	8.9	9.8	7.6	9.0	12.7	13.2	13.9	14.5	16
Others	6.6	5.2	4.8	5.1	5.2	5.9	4.9	4.3	4.8	6.2	3.0	3.5	4.2	4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100

Source: Review of the Economy 1978, 1985, 1986

DOMESTIC EXPORTS SHOWING PRINCIPAL ITEMS IN RELATION TO TOTAL DOMESTIC EXPORTS

TABLE 2.7

$ million

YEAR	PETROLEUM ETC INCLUDING FERTILIZER	(%)	AGRICULTURAL	(%)	MANUFACTURING	(%)	ALL OTHER PRODUCTS	(%)	TOTAL	(%)
1970	813.0	(86.1)	71.9	(7.6)	11.7	(12)	47.7	(5.1)	944.3	(100.0)
1974	3,668.0	(93.3)	138.4	(3.5)	17.2	(0.4)	110.5	(2.8)	3,934.1	(100.0)
1975	3,478.5	(90.5)	203.0	(5.3)	21.4	(0.6)	137.1	(3.6)	3,840.0	(100.0)
1976	5,011.2	(94.0)	156.3	(2.9)	17.9	(0.3)	147.2	(2.8)	5,332.6	(100.0)
1977	4,922.3	(94.7)	132.3	(2.5)	14.3	(0.3)	130.4	(2.5)	5,199.3	(100.0)
1978	4,550.5	(94.7)	113.5	(2.4)	15.5	(0.3)	123.2	(2.6)	4,802.7	(100.0)
1979	5,869.3	(95.0)	144.3	(2.3)	36.7	(0.6)	130.2	(2.1)	6,180.5	(100.0)
1980	5,845.8	(94.4)	114.7	(1.9)	40.3	(0.7)	182.5	(3.0)	6,183.3	(100.0)
1981	8,369.3	(96.0)	109.6	(1.3)	43.2	(0.5)	192.7	(2.2)	8,714.8	(100.0)
1982	6,732.0	(94.1)	90.8	(1.3)	31.4	(0.4)	300.4	(4.2)	7,154.6	(100.0)
1983	5,092.0	(93.8)	85.0	(1.6)	103.0	(1.8)	151.3	(2.8)	5,431.3	(100.0)
1984	4,693.0	(93.0)	86.0	(1.7)	126.0	(2.5)	139.8	(2.8)	5,044.8	(100.0)
1985	4,800.0	(94.8)	82.0	(1.6)	79.0	(1.6)	103.2)	(2.0)	5,064.2	(100.0)

Source: Annual Statistical Digest. op cit, 1984, 1985 p. 150

(b) The Petroleum Sub-sector: Production

The production of crude oil almost doubled between 1971 and 1977/78 when production peaked at 13.3 million cubic metres (Table 2.8). Production declined steadily to reach 9.3 million cubic metres in 1983 and then recovered to reach 10.2 million cubic metres in 1985. The data suggests a fall of 5 per cent in 1986. The slight increase in the level of production has not been reflected in increased earnings because of prevailing low prices. Exports of crude oil and refinery throughput, as could be expected, closely paralleled production with a slight increase being achieved since 1983.

The volume of refined products exported fell steadily from 21.7 million cubic metres in 1971 to 4.0 cubic metres in 1985; the data suggests that there was a slight recovery in 1986. The slight fall in world demand for petroleum products in recent years cannot fully explain the nearly 50 per cent reduction in refined products exported since 1982. The full answer lies in the high production costs which make refined petroleum products from Trinidad and Tobago particularly unattractive.[1] These factors have lead therefore to a virtual cessation of crude oil imports for processing and re-export.

(c) Trade

"The buoyant trade and payments position which Trinidad and Tobago enjoyed in the period 1974-1981 was reversed during the years 1982-1984.[2] The deficits in trade and payments were mainly caused by lower oil prices and lower levels of petroleum production.

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1 "Economic and Social Progress in Latin America - Economic Integration" 1984 Report - Inter-American Development Bank, Washington D.C.

2 Review of the Economy 1984 - p. 56

CRUDE OIL PRODUCTION, IMPORTS, REFINERY THROUGHPUT AND EXPORTS

TABLE 2.8

(MILLION CUBIC METERS)

YEAR	CRUDE OIL PRODUCTION	CRUDE OIL IMPORTS	CRUDE OIL EXPORTS	REFINERY THROUGHPUT	IMPORTS AS A % OF REF. THROUGHPUT	REFINERY OUTPUT	REFINERY PRODUCTS EXPORTED
1971	7.5	17.0	1.1	23.1	23.5	N/A	21.7
1974	10.8	15.2	5.1	20.8	73.0	20.2	19.3
1975	12.5	9.2	7.5	13.6	67.8	13.2	14.5
1976	12.4	13.5	7.0	18.7	72.1	18.2	16.5
1977	13.3	10.5	7.9	15.9	66.9	15.3	13.1
1978	13.3	9.0	8.1	13.7	65.7	13.2	11.5
1979	12.4	8.2	7.0	13.2	62.1	12.7	10.6
1980	12.3	8.3	7.3	12.4	66.9	13.1	10.7
1981	11.0	6.1	6.0	10.1	61.0	9.6	8.4
1982	10.3	3.7	5.3	8.8	43.0	8.6	7.3
1983	9.3	0	4.8	4.3	0	4.5	4.6
1984	9.9	1.0	5.20	4.5	22.2	4.2	4.6
1985	10.2	0.03	5.6	4.7	0.6	4.8	4.0
1985 (JAN-JUNE)	5.1	0.8	2.7	2.3	3.5	2.2	1.90
1986 (JAN-JUNE)	4.8	Ø	2.5	2.2	Ø	2.2	2.10

Note: Barrels x .1586 = Cubic Meters

Source: Review of the Economy op cit 1978, 1986 - Appendix 29

The economy registered a trade deficit in 1982, the first since 1974. The deficit was the result of an 18 per cent fall in the value of exports in 1982 combined with the then usual 18 per cent increase in the value of imports (Table 2.9). The economy responded with a 30 per cent reduction in the value of imports in 1983, this effort however was accompanied by a 23 per cent fall in the value of exports. The deficit was reduced in 1983 to minus TT $550.4 million. The value of exports continued to fall by 8 per cent in 1984 and a positive balance of TT $610.3 million was achieved only by a further 26 per cent reduction in the value of imports. In 1985 the value of exports stabilized, partly through the expansion of non-petroleum exports. Further reductions in the value of imports led to a surplus of $1.5 billion in 1985. The surplus is expected to be smaller in 1986, due largely to increased imports.

Efforts to increase the value of non-oil exports have been successful (Table 2.10). The value of such exports rose by an average of 12 per cent over the period since 1979 to reach $941.7 million in the first ten months of 1986.

Study of the real value of exports (Table 2.11) indicates that given inflation in import prices, the real base of imports that could be financed by exports was smaller than indicated in Table 2.9. This would therefore suggest an even greater need to increase the value of exports (by increased quantities of traditional exports and the diversification of the export base) and to reduce the volume of imports. It is therefore important to look at what categories of goods have been affected by import curbs.

Consumer and intermediate goods were, unfortunately, the last to respond to the down-turn after 1981. These two categories did not react until 1984 (Table 2.12). Imports of raw materials have been in decline since 1983 and imports of capital goods have fluctuated since 1981. Closer analysis will be necessary to explain the steady growth in non-oil exports in the face of declining imports of raw materials. It is interesting to note that only capital goods show an increase in the 1984/1985 period and that in 1986, intermediate goods, raw material and capital goods all showed increases.

BALANCE OF VISIBLE TRADE

TABLE 2.9

$ Million

YEAR	EXPORTS	IMPORTS	BALANCE
1979	6,265.0	5,051.0	1,214.0
1980	9,784.8	7,626.0	2,158.8
1981	9,025.9	7,498.9	1,527.0
1982	7,372.4	8,873.1	-1,500.7
1983	5,646.3	6,196.7	- 550.4
1984	5,216.2	4,604.9	610.3
1985	5,247.1	3,739.0	1,508.1
1985 (Jan-Oct)	4,407.1	2,963.3	1,443.8
1986 (Jan-Oct)	4,249.8	4,027.2	222.6

Source: "Review of the Economy" op cit, 1985, 1986.

VALUE OF DOMESTIC NON-OIL EXPORTS BY SITC SECTION

TABLE 2.10

	1979	1980	1981	1982	1983	1984	1985	1985 (JAN-OCT)	1986 (JAN-OCT)
Food and Live Animals	167.4	171.8	156.8	97.5	103.0	97.0	86.3	82.8	145.4
Beverages and Tobacco	22.0	23.0	21.3	29.0	22.9	22.0	23.1	21.4	38.5
Animal and Vegetable Oils and Fats	0.4	1.3	0.4	0.1	0.1	0.0	0.1	Ø	0.1
Manufactured Goods	63.0	72.8	100.2	127.7	122.1	157.7	103.8	83.8	26.0
Other [1]	209.3	261.5	299.8	372.2	490.6	579.2	717.5	583.4	941.7
TOTAL	462.1	530.4	578.3	626.5	738.7	875.5	930.8	771.4	1,151.7

1 Includes Crude Materials other than fuels, chemicals, machinery and transport equipment miscellaneous transactions.

Source: Review of the Economy Op Cit 1985 p. 147, 1986 - Appendix 75

REAL VALUE OF EXPORTS

TABLE 2.11

(Base Year 1974 = 100)

YEAR	CURRENT VALUE OF EXPORTS ($ Million)	IMPORT PRICE INDEX	DEFLATED EXPORT VALUES ($ Million)
1979	1,542.8	164.9	936.2
1980	2,428.9	247.6	981.0
1981	2,178.6	279.8	778.6
1982	1,788.6	316.6	565.1
1983	1,358.0	31.69	429.8
1984	1,261.1	319.4	395.5
1985	1,280.6	330.5	395.8

Source: "Annual Statistical Digest", op cit No 30, 1983 p 163; 1985 p 163.

NON-OIL IMPORTS BY ECONOMIC END USE

TABLE 2.12

TT $ Million

	1980	1981	1982	1983	1984	1985	1985 (JAN-JUNE)	1986 (JAN-JUNE)
Consumer Goods	1,158.8	1,321.7	1,531.7	1,608.3	1,453.4	1,096.6	506.9	495.0
Intermediate Goods	1,584.5	1,602.3	1,995.4	2,014.0	1,694.1	1,289.1	618.7	854.0
Raw Material	309.2	358.7	417.0	335.0	368.6	255.7	139.3	148.4
Capital Goods	1,745.1	1,484.2	2,649.6	1,923.5	1,064.6	989.4	531.8	773.8

Source: Review of the Economy op cit 1985 p. 148: 1986 - Appendix 78

In general, the Trade of Trinidad and Tobago is directed outside of the Region. Imports from the Region never exceeded eight per cent of total imports over the period 1979 to 1986 and in fact fell to 3.6 per cent in 1980. The share of imports provided by the Commonwealth Caribbean fell to 4.4 per cent in 1986. (Table 2.13). The relative value of exports increased slightly in 1983 but only managed to reach 10.5 per cent and has fallen again to reach 10 per cent in 1986.

The trade between Trinidad and Tobago and the Member States of the Caribbean Community is dominated by petroleum. Trinidad and Tobago has enjoyed a large positive balance of trade with CARICOM; in every year under review, the balance rose to as high as one half billion dollars in 1980 and 1981 (Tables 2.14 (a b c). The highest level of surplus achieved in 1980. The level of surplus has fallen, since, with a particularly steep fall in 1982/1983, there has however been a recovery in 1985. This pattern is consistent with the general pattern of CARICOM trade over this period.

Trinidad and Tobago enjoyed a positive trade balance with most Commonwealth Caribbean countries over the period 1979 to 1985, the exceptions being Belize, Jamaica and St Vincent and the Grenadines. It is interesting to note however, that in every case except Dominica, the tendency has been for an increased trade surplus (or reduced deficit).

In general therefore, the economy of Trinidad and Tobago, funded by petroleum earnings, became very buoyant up to 1982. The decline since 1982 has been largely attributable to falling petroleum prices and declining production. The decline in GDP (at Factor Cost, Current Prices) has been regular but fairly gradual up to 1985. The data available suggests that effective corrective measures have been taken to control the level of imports and to diversify the production base. Part B of this paper will examine the agricultural sector in the context of the changes in the wider economy.

IMPORTS (CIF) AND EXPORTS (FOB) OF TRINIDAD AND TOBAGO 1979-1986

DIRECTION OF TRADE

TABLE 2.13

IMPORTS (CIF)

	COMMONWEALTH[1] CARIBBEAN COUNTRIES	REST OF WORLD	TOTAL	COMMONWEALTH CARIBBEAN AS % OF TOTAL
1979	231,338.5	4,819,632.2	5,050,970.7	4.5
1980	272,016.3	7,354,379.3	7,626,395.6	3.6
1981	307,134.8	7,191,787.7	7,498,922.5	4.1
1982	410,362.1	8,462,734.0	8,873,096.1	4.6
1983	446,206.6	5,750,468.9	6,196,675.5	7.2
1984	337,900.0	4,268,000.0	4,605,900.0	7.3
1985	238,800.0	3,500,200.0	3,739,000.0	6.4
1985 (JAN-JUNE)	116,500.0	2,846,800.0	2,963,300.0	6.3
1986 (JAN-JUNE)	100,900.0	3,926,300.0	4,027,200.0	4.4
EXPORTS (FOB)				
1979	515,406.6	5,749,590.1	6,264,996.7	8.2
1980	857,574.5	8,927,188.1	9,784,762.6	8.8
1981	760,708.7	8,265,189.3	9,025,898.0	8.4
1982	726,420.0	6,645,962.9	7,372,382.9	9.9
1983	592,680.5	5,053,666.9	5,646,347.4	10.5
1984	509,200.0	5,157,000.0	5,216,200.0	9.8
1985	605,200.0	4,641,900.0	5,247,100.0	11.5
1985 (JAN-JUNE)	264,100.0	4,143,000.0	4,407,100.0	10.4
1986 (JAN-JUNE)	282,400.0	3,967,400.0	4,249,800.0	10.0

1 Includes: British Virgin Islands; Anguilla; Bermuda; Cayman Islands; Turks and Caicos Islands

Source: Review of the Economy op cit 1986

TABLE 2.14 (a)

SUMMARY BY VALUE OF IMPORTS WITH EACH CARICOM COUNTRY AS PERCENTAGE OF TOTAL, 1975–1985

Imports from CARICOM Countries	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Jan.–Sept. 1984	Jan.–Sept. 1985
Jamaica	39.5	38.6	40.6	36.7	40.7	34.2	33.8	34.2	30.7	25.5	26.9	21.2
Guyana	39.4	34.2	28.5	24.6	21.9	21.4	24.8	19.0	14.0	15.7	14.3	13.9
Barbados	14.7	16.0	17.6	19.6	17.8	23.3	24.3	26.1	25.6	26.7	27.3	21.6
LDCs	6.2	11.2	13.3	19.0	19.5	20.9	16.9	20.5	29.6	32.0	31.5	43.3
St. Lucia	1.1	2.0	2.4	2.6	2.5	2.5	1.9	2.4	3.0	2.5	2.4	1.4
Grenada and Grenadines	1.0	1.0	1.0	1.1	0.9	1.4	2.0	2.3	2.8	2.8	2.7	4.6
Dominica	0.1	0.1	0.6	0.6	0.5	0.4	0.4	0.1	1.2	2.5	2.0	2.1
Antigua/Barbuda ...	0.4	0.5	0.9	3.0	4.2	4.3	4.1	5.1	3.6	1.9	2.1	1.5
St. Kitts, Nevis, Anguilla	1.4	3.7	3.6	4.0	2.4	2.3	1.6	1.8	1.5	2.0	2.0	2.0
Montserrat	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.3	0.4	0.0
St. Vincent	1.6	1.9	2.7	3.4	2.6	3.1	2.8	3.7	8.7	12.2	11.3	24.7
Belize	0.6	1.9	2.1	4.3	6.4	6.9	4.0	5.1	4.0	7.7	8.7	6.9
Bahamas	–	–	–	–	–	–	–	–	4.6	0.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Office

TABLE 2.14 (b)

SUMMARY VALUE OF EXPORTS WITH EACH CARICOM COUNTRY AS PERCENTAGE OF TOTAL, 1975–1985

Exports to Caricom Countries	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Jan.–Sept. 1984	Jan.–Sept. 1985
Jamaica	35.0	17.1	16.9	18.7	15.9	20.6	21.9	17.2	14.6	10.5	10.6	9.7
Guyana	34.8	42.8	41.4	37.6	36.5	29.8	36.0	39.8	29.5	35.5	34.5	29.2
Barbados	13.1	14.6	17.5	17.5	22.3	22.1	19.0	21.1	27.5	26.2	27.1	27.0
LDCs	17.1	25.4	24.0	26.2	25.1	27.3	23.1	21.7	28.3	27.5	27.8	34.1
St. Lucia	3.7	4.4	5.2	6.0	6.1	5.5	4.8	4.4	4.0	5.3	5.3	5.6
Grenada and Grenadines	3.7	4.0	4.0	4.1	3.8	3.7	3.4	4.1	3.7	4.2	4.1	3.9
Dominica	1.2	1.4	1.4	1.4	1.1	0.9	0.8	0.9	0.8	1.0	1.0	1.2
Antigua/Barbuda	3.0	7.6	8.2	8.8	8.0	11.8	8.8	6.8	8.7	9.3	9.7	10.6
St. Kitts, Nevis, Anguilla	1.6	1.9	1.7	2.0	2.1	2.3	2.0	1.9	1.8	2.6	2.5	3.5
Montserrat	0.7	0.6	0.4	0.6	0.6	0.3	0.6	0.8	0.6	1.0	0.9	0.9
St. Vincent	2.9	3.0	2.7	3.1	3.3	2.7	2.6	2.7	2.7	2.9	2.9	3.4
Belize	0.3	2.5	0.4	0.2	0.1	0.1	0.1	0.1	0.2	0.5	0.6	0.3
Bahamas	–	–	–	–	–	–	–	–	5.8	0.7	0.9	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Statistical Office

TABLE 2.14 (c)

SUMMARY VALUE OF TRADE WITH CARICOM COUNTRIES, 1975–1985

Millions of Dollars

Trade with CARICOM Countries	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	Jan.–Sept. 1984	Jan.–Sept. 1985[1]
Exports												
Jamaica	117.4	65.1	59.2	64.1	74.0	149.8	155.4	112.9	76.7	49.7	39.0	40.2
Guyana	116.7	163.4	144.8	128.7	170.4	216.2	256.0	261.6	155.1	167.9	126.5	121.4
Barbados ...	44.0	55.7	61.3	59.9	104.0	160.6	135.3	138.7	144.9	124.0	99.4	112.2
LDCs[1]	57.6	97.2	84.6	90.0	117.5	198.8	163.7	143.6	149.4	130.7	102.2	141.5
Total	335.7	381.4	349.9	342.7	465.9	725.4	710.4	656.8	526.1	472.3	367.1	415.3
Imports												
Jamaica	36.0	50.6	56.4	61.6	94.1	91.8	103.6	140.2	136.7	86.0	65.8	35.7
Guyana	35.9	44.8	39.6	41.4	50.7	57.5	76.0	78.1	62.5	52.9	34.9	23.4
Barbados	13.4	21.0	24.6	32.9	41.2	62.4	74.5	107.1	113.8	90.2	66.8	36.3
LDCs[1]	5.8	14.7	18.6	32.0	45.2	56.3	52.0	84.4	131.9	108.3	77.3	72.8
Total	91.1	131.1	139.4	168.0	231.2	268.0	306.1	409.9	445.0	337.5	244.8	168.2

Source: Central Statistical Office

[1] Includes St. Lucia, Grenada and Grenadines, Dominica, Antigua, St. Kitts/Nevis, Anguilla, Montserrat, St. Vincent and Belize.

P A R T B

THE AGRICULTURAL SECTOR

1978 TO 1986

CHAPTER THREE

LAND USE AND OWNERSHIP

- PROFILE OF THE FARMER IN TRINIDAD AND TOBAGO
- LAND USE

Much has been written about the need to increase agricultural production for export and domestic consumption. The achievement of this goal will rest no doubt on the provision of increased physical and institutional support to the agricultural sector. The ability of the sector to absorb these increased levels of inputs will rest however on the farming systems in place and the ability of farmers to adapt to the new environment and to adopt new technologies. This chapter will deal briefly with the social structure of the agricultural sector of Trinidad and Tobago.

PROFILE OF THE FARMER IN TRINIDAD AND TOBAGO

More than half of the farmers of Trinidad and Tobago in 1982 derived less than half of their income from agricultural activity (Table 3.1). The national pattern was evident in every county with slightly higher levels of 'part time' farming evident in Tobago and St Patrick. At the national level, only 27 per cent of the farmers of Trinidad and Tobago earned more than 75 per cent of their income from agriculture.

The data above suggests that the agricultural production of Trinidad and Tobago is based largely on farmers with considerable investment/interest in other sectors of the economy. This structure implies flexibility on the part of farmers and the existence at that time (1982), of investment opportunities outside of the agricultural sector. In fact, the 1982 census further shows that the majority of farmers up to age 57 retain substantial interest outside of the sector (Table 3.2).

It was suggested in an earlier section that the general downturn in the economy may have lead to a greater dependence on agriculture as an employer. This thesis seems to be supported by the rapid increases in agricultural production in recent years. Domestic agriculture grew by an average of 10.9 per cent over the period 1980 to 1986. Trinidad and Tobago has achieved practical self-sufficiency for the first time in green and root vegetables and poultry. The increases in production are in no small part due to the provision of institutional support in the form of production subsidies, price support programmes and low-interest farm credit.

FARM HOLDERS BY AREA OF RESIDENCE AND PERCENTAGE OF INCOME DERIVED FROM AGRICULTURAL ACTIVITY

INCOME GROUP (PER CENT)

TABLE 3.1

AREA OF RESIDENCE	TOTAL	<25%	25 - 49%	50 - 74%	>75%	NOT STATED
St George	4,634 (100.0%)	1,860 (40.1%)	832 (18.0%)	609 (13.1%)	1,204 (26.0%)	120 (2.8%)
Caroni	4,963 (100.0%)	1,985 (40.0%)	1,180 (23.8%)	681 (13.7%)	913 (18.4%)	204 (4.1%)
Mariva/Mayaro	2,457 (100.0%)	809 (32.9%)	501 (20.4%)	434 (17.7%)	682 (27.8%)	31 (1.2%)
St Andrew/St David	3,140 (100.0%)	1,146 (36.5%)	733 (23.3%)	452 (14.4%)	738 (23.6%)	71 (2.2%)
Victoria	7,173 (100.0%)	2,541 (35.4%)	1,380 (19.2%)	1,216 (17.0%)	1,970 (27.5%)	66 (0.9%)
St Patrick	6,109 (100.0%)	3,132 (51.3%)	1,061 (17.4%)	523 (8.6%)	1,021 (16.7%)	372 (6.1%)
Tobago	1,946 (100.0%)	803 (41.3%)	569 (29.2%)	340 (17.5%)	176 (9.0%)	50 (3.0%)
TRINIDAD & TOBAGO - TOTAL	30,422 (100.0%)	12,276 (40.4%)	6,256 (20.6%)	4,255 (14.0%)	6,704 (22.0%)	931 (3.0%)

Source: "1982 Agricultural Census" Central Statistical Office, Trinidad and Tobago, p.26

FARM HOLDERS BY MAIN OCCUPATION AND AGE GROUP - TRINIDAD AND TOBAGO

TABLE 3.2

AGE GROUP

Main Source of Income	<25	25-34	35-44	45-54	55-64	>65
Agricultural	50.5%	47.1%	45.4%	46.6%	55.5%	71.6%
Non-Agricultural	49.5%	52.9%	54.6%	53.4%	44.5%	28.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: "1982 Agricultural Census" op cit p.28

The financial arrangements for land holding are in the main simple, with 96.0 per cent of land holdings owned/operated by individuals (Table 3.3). The pattern of tenure is shown in Table 3.4. 64.7 per cent of the area farmed is owned by the farm operator, with 22.8 per cent rented/leased and just 6 per cent operated by squatters. The pattern of land distribution reveals some degree of "skewdness" in that 47 per cent of farms account for 65 per cent of the area farmed. This however shows some improvement over previous distribution patterns.

The Government of Trinidad and Tobago had instituted a "State Land Development Project" but the "White Paper on Agriculture 1978" noted the mixed results of the project and planned to review the entire land distribution policy.

A profile of the education of farmers is shown in Table 3.5. It is good to note that 76 per cent of farmers have had primary education and may thus be presumed to be functionally literate. This will again be reflected in the willingness of farmers to adapt to new situations that arise in the sector. One per cent of farmers (283 persons) have had a university education and this, in a relatively small economy, should provide the nucleus for innovation. It is disturbing to note that as many as 12.6 per cent of farmers have had no formal education. The high overall level of education of farmers would suggest a high rate of return on investments in farmer training; it is therefore surprising to note that just 4 per cent of farmers have attended agricultural training courses.

TRINIDAD AND TOBAGO LAND HOLDERS BY TYPE OF ORGANISATION OF HOLDINGS

TABLE 3.3

	No.	%
Individual	29,358	96.0
Joint Partnership	1,064	3.5
Cooperative Society	8	-
Private Company	83	0.3
State Enterprise	3	-
Government	50	0.2
Other	-	-
TOTAL	30,566	100.0

Source: "1982 Agricultural Census": Op cit p.23.

PRIVATE HOLDINGS BY TYPE OF TENURE AND HECTARAGE

TABLE 3.4

TYPE OF TENURE	NO.	%	HECTARAGE	%
Owned	14,334	47.1	66,620.5	64.7
Rented/Leased	11,028	36.1	23,532.1	22.8
Squatting	3,367	11.0	6,155.1	6.0
Held Otherwise	1,784	5.8	6,679.4	6.5
TOTAL	30,513	100.0	102,987.1	100.0

Source: "1982 Agricultural Census": Op cit p.45.

The age distribution of farmers is shown in Table 3.6. The data shows that 80.0 per cent of farmers are in the age group of 25 to 64 with just 17 per cent being older than 65 years.

The picture that emerges therefore of the farmer in Trinidad and Tobago contains three essential ingredients:

- the farmer is sensitive to investment opportunities wherever they occur outside or inside the agricultural sector;

- 64.7 per cent of the area farmed is owned by the operator who will therefore have no legal barriers to changes in farming methods;

- the large majority of farmers are well educated and between the ages of 24 and 64 years.

FARM HOLDERS BY HIGHEST LEVEL OF EDUCATION ATTAINED (%)

TABLE 3.5

Total	No Education	Highest Level Attained			
		Primary	Secondary	University	Other
100.0	12.6	75.6	9.5	0.9	1.4

Source: "1982 Agricultural Census": Op cit p.32

FARM HOLDERS BY AGE GROUP (%)

TABLE 3.6

Age Group	%
Less than 25 years	3.0
25-34 years	12.2
35-44 years	21.4
45-54 years	25.3
55-64 years	21.0
Over 65	17.0
TOTAL	100.0

Source: "1982 Agricultural Census": Op cit p.24.

LAND USE

In 1973, 166,572 hectares or only 31.6 per cent of the total area of Trinidad and Tobago was devoted to agricultural activity.[1] The data revealed that 81.3 per cent of agricultural land was devoted to permanent crops and sugar cane, commodities destined primarily for export.

The data for 1982 (Table 3.7)[2] reveals little change, with 81.8 per cent of agricultural land devoted to the same export crops. In contrast, vegetables, root crops, pulses, grain, plantains, bananas and other crops destined for the domestic market occupied just 11.5 per cent of the total. (The area devoted to grassland, which is 5.2 per cent of the total, should also be added, as livestock production is directed primarily at the domestic market). The large increases registered by farmers in this subsector (domestic foodcrops and vegetables), using less than 20 per cent of the agricultural land, is nothing short of remarkable. No data is available to indicate changes in patterns of land use since 1982; it does seem however, that the increases have been achieved by more intensive cultivation of the area already under root-crops and vegetables.

1. Agricultural Census 1963. Central Statistical Office, Ministry of Finance, Trinidad and Tobago.
2. "1982 Agricultural Census" op cit.

LAND USE - AREA UNDER CULTIVATION (AS AT 31 MAY 1982) - HECTARES

TABLE 3.7

Crops	Hectares		% All Crops	% Temporary Crops
Permanent Crops		44,239.7	51.3	-
Cocoa	20,942.9			
Coffee	9,289.6			
Coconuts	6,564.4			
Citrus	3,524.5			
Banana	2,337.3			
Plantain	922.4			
Other	648.6			
Forest Products		1,329.9	1.5	-
Pulses and grains		3,965.5	4.6	9.7
Rice	1,042.7			
Corn	1,168.8			
Pigeon Peas	790.0			
Beans (The Soya)	145.0			
Bodi	328.3			
Other	490.7			
Vegetables		3,523.2	4.1	8.7
Cabbage	204.7			
Pakchoy	92.5			
Lettuce	51.3			
Spinach	25.6			
Dasheen Bush	50.1			
Pumpkin	652.3			
Ochro	267.1			
Melongene	231.1			
Cucumber	391.7			
Tomatoes	440.1			
Hot Peppers	190.2			
Sweet Peppers	205.3			
Mixed Vegetables	512.6			
Other Vegetables	208.6			
Root Crops		2,194.8	2.5	5.4
Dasheen	543.3			
Yam	218.4			
Cassava	506.4			
Tannia	54.1			
Eddoes	215.4			
Sweet Potatoes	252.2			
Mixed Root Crops	348.4			
Other	54.6			
Sugar Cane		26,277.1	30.5	64.6
Cultivated Grasslands		4,503.8	5.2	11.1
All Other Temporary Crops[1]		220.4	0.3	0.5
Total Temporary Crops[2]		40,684.8	-	100.0
Total All Crops		86,254.4	100.0	-

Source: "1982 Agricultural Census" op cit p.68-120.

1. Tobacco, Sorrel

2. Incl. Grasslands.

CHAPTER FOUR

THE BACKGROUND TO PRODUCTION

- PHYSICAL INFRASTRUCTURE
- INSTITUTIONAL INFRASTRUCTURE
- THE AVAILABILITY OF INPUTS

PHYSICAL INFRASTRUCTURE

(a) Roads and Transport

Road congestion has been a problem in Trinidad and Tobago for the last decade or so, especially in the densely populated "East-West Corridor" of Trinidad. The number of motor vehicles licensed in Trinidad and Tobago increased by more than 100 per cent over the decade of the 1970's, from 74,000 in 1970 to 145,000 in 1980, and nearly 200,000 in 1985, (Table 4.1). The Government launched an extensive programme of construction of major arterial and secondary roads that at first increased the level of congestion but, as the pieces fell into place, greatly eased the level of congestion.

One ironic result of heavy road congestion is that it reduces the efficiency of utilization of motor vehicles and so forces the acquisition of even more vehicles. This is true of many farmers who often acquired trucks that were grossly underutilized.

The acquisition of 'goods vehicles'[1] and tractors and trailers increased by 139 and 78 per cent respectively over the decade of the 1970's. This rate of increase fell in 1982 and by 1983 there was a decline in the number of registrations of tractors and trailers. The number of goods vehicles registered has grown slowly in recent years. Closer examination will be required to assess the extent to which this decline is due to:

(a) a lower level of availability of funds; or

(b) a reluctance on the part of farmers and other businessmen to undertake the heavy capital investment required in vehicle purchasing.

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1. Some 'goods vehicles' are used in other sectors.

There is little in the data however to suggest that farmers are not adequately provided with transport. The data does show that 31 per cent of private holdings in Trinidad and Tobago do not have access roads that can accommodate motor vehicles.[1] There seems therefore to be a need to focus attention at this time on the system of farm access roads now that the main roads have been improved.

1. "Agricultural Census 1982" op cit p.65.

MOTOR VEHICLES LICENCED AND REGISTERED: SELECTED YEARS

TABLE 4.1

At End of	Private	Hire & Rented	Omnibus[2]	Goods Vehicles		Tractors & Trailers		Motor Cycles	Free[1]	TOTAL	
				No	% Change over Previous Year	No	% Change over Previous Year			No	% Change over Previous Yr.
1970	49,912	9,373	289	9,250		3,551		1,759	-	74,134	
1980	88,477	22,450	206	22,071	138.6	6,315	77.8	3,637	2,273	145,429	
1981	107,711	24,681	429	29,402	33.2	6,636	5.1	4,398	3,344	176,601	21.4
1982	110,910	24,903	240	33,461	13.8	5,984	10.0	4,099	2,909	182,504	3.3
1983	113,982	24,475	-	32,412	3.0	5,805	2.9	4,144	3,850	184,668	1.2
1984	124,717	28,416	311	33,014	1.9	5,652	-2.6	3,740	2,958	198,808	7.7
1985	127,716	26,392	567	33,846	2.5	5,340	-5.5	3,035	3,024	199,920	0.6

Source: "Annual Statistical Digest": Op cit 1978; 1983; 1985 p.136

1. Includes vehicles that do not require a licence such as diplomatic vehicles and fire engines. Also includes Heavy Duty Equipment and Omnibuses since 1983.

2. See Note 1.

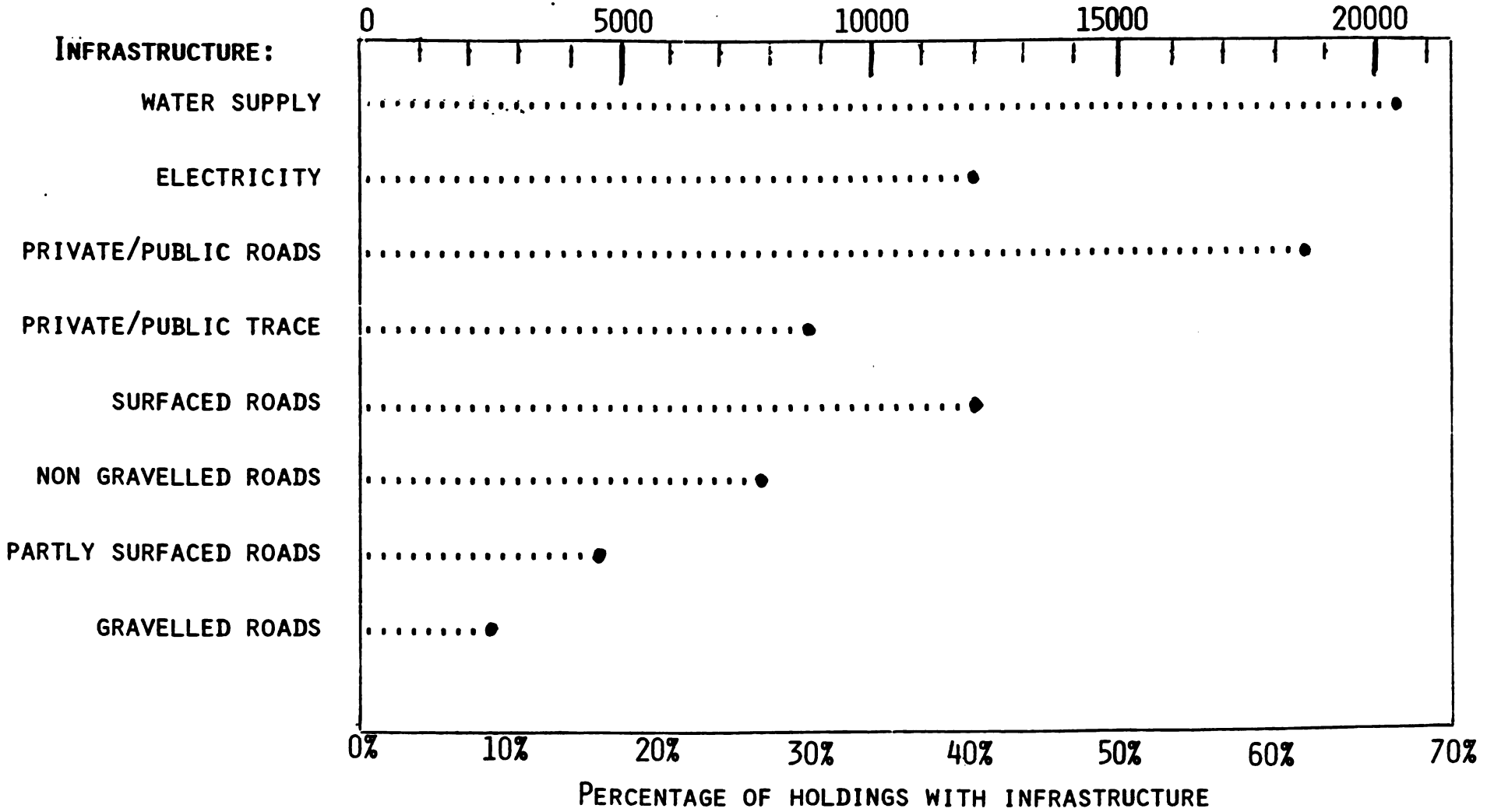
(b) Electricity and Water Supply

Just over 60 per cent of farms in Trinidad and Tobago do not have electricity (Chart 4.1). Of these, 7,568 or 42 per cent are more than one mile from the nearest electricity pole and 778 are more than 5 miles. It is interesting to note that more than 50 per cent of farms that do not have electricity are within one mile of an electricity pole. Further examination will be required to determine the extent to which this reflects a high incidence of 'non-resident' farming and where the farmer does not maintain equipment that requires electric power, as for example, in most vegetable 'gardens'.

More than 30 per cent of farmers in Trinidad and Tobago do not have a pipe-borne potable (non-irrigation) water supply. These farms rely instead on a variety of measures which include private catchment, ponds and wells.

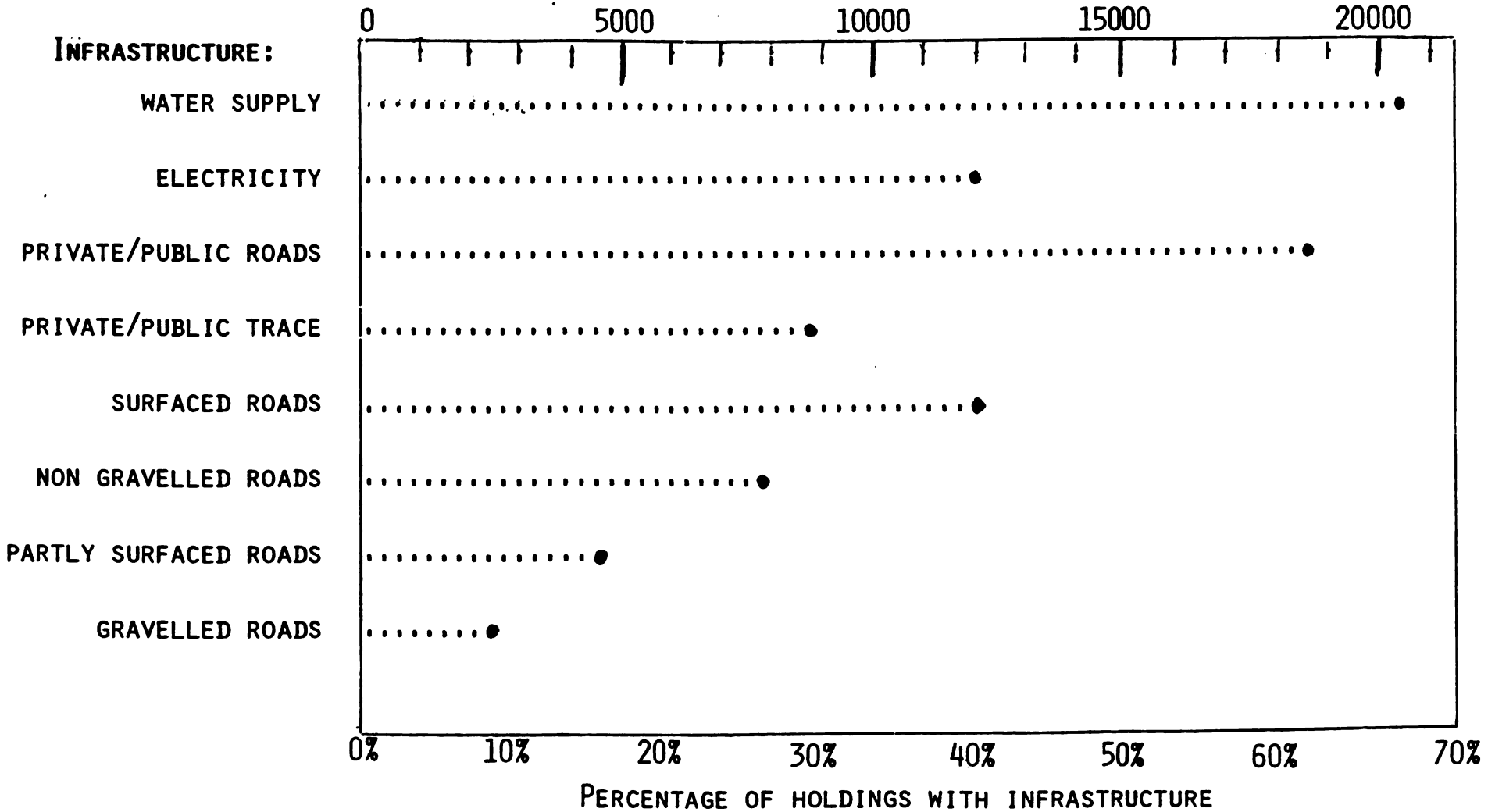
The level of supply of electricity and pipe-borne water seems at first to be low, given the relatively small size of Trinidad and Tobago. It must be remembered however that some of the most fertile soils occur in the rugged Northern Range and it may be more efficient to subsidize the use of private electricity generators (as is the case presently on many farms) and water supply systems for human use, irrigation and livestock.

CHART 4.1 PRIVATE AGRICULTURAL HOLDINGS GROUPED BY INFRASTRUCTURE, 1982



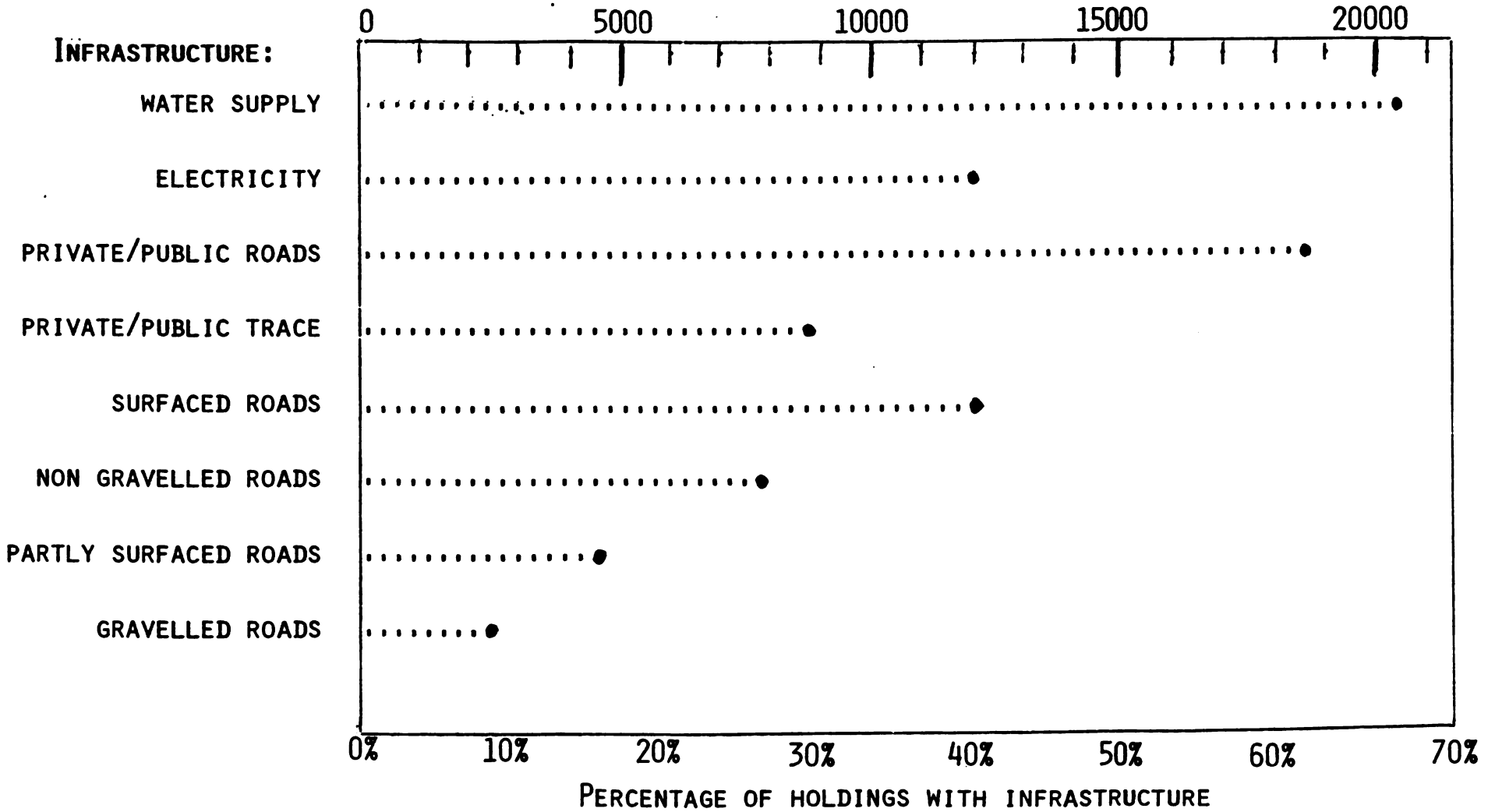
Source: Agricultural Census 1982 op cit p. 64

CHART 4.1 PRIVATE AGRICULTURAL HOLDINGS GROUPED BY INFRASTRUCTURE, 1982



Source: Agricultural Census 1982 op cit p. 64

CHART 4.1 PRIVATE AGRICULTURAL HOLDINGS GROUPED BY INFRASTRUCTURE, 1982



Source: Agricultural Census 1982 op cit p. 64

INSTITUTIONAL INFRASTRUCTURE

The Agricultural Sector of Trinidad and Tobago is served by several institutions that cover the wide range of services from research and development to marketing and credit. This paper will not seek to examine in detail the operations of these agencies which, in any event, are detailed in their various operating reports. The vital importance of the two agencies, however, suggests that they should be briefly examined.

(a) The Ministry of Agriculture

The major provider of institutional support by the public sector to farmers is the Ministry of Agriculture. The role of this Ministry is seen as pivotal to the organisation and management of the national agricultural system.[1] The Ministry was seen as fulfilling three functions:

(a) policy formulation and planning;

(b) the direct provision of funds (through subsidies, the development programme of the Ministry and through non-Ministerial agencies such as the Agricultural Development Bank);

(c) the provision of institutional infrastructure. (Extension and information services, research and development).

The Ministry has performed this role creditably over the years and indeed was called upon to serve in the implementation of a programme of "National Recovery" by the Prime Minister in his 1987 Budget Speech.

The Prime Minister spoke of a "National Recovery Impost" which was expected to net $50 million in 1987. The impost will be directed to programmes that

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1. "Whole Paper on Agriculture" 1978.

generate employment, economic growth and foreign exchange earnings/savings. Specifically, it is envisaged that the programmes will seek, as much as possible:[1]

- to generate employment;
- to be import-independent;
- to generate output quickly; and
- to impact on a large number of persons (including those not directly employed by the project).

The Prime Minister continued that "obvious candidates (for such projects) include re-afforestation, agriculture, agro-industry, building materials and certain infra-structural works including flood relief."

It seems therefore that the Agricultural Sector of Trinidad and Tobago is scheduled to play a major role in the necessary diversification of the economy. The proper execution of this task will require imagination and determination on the part of the Ministry of Agriculture which is faced with an expanded role and a 7 per cent reduction in Budgeted Recurrent Expenditure in 1987 (Table 4.2).

(b) The Agricultural Development Bank

The Agricultural Development Bank (ADB) was established in 1968, to encourage the development of agriculture by ensuring adequate supplies of low-interest credit to the agricultural sector. The funding for the ADB was originally provided primarily by Government and, as a result, the Bank was forced to curtail its lending activities during the economic depression of 1972-1974 when the Government was unable to provide adequate

1. 1987 Budget Speech of the Honourable A.N.R. Robinson, Prime Minister and Minister of Finance and the Economy, 23 January 1987.

financing. The same situation exists during the current down-turn in the economy and the Bank has again been forced to curtail lending to the level supportable by the internal generation of funds or by funds obtained from international lending agencies.

The reduction in lending caused by declining support from Government has been evident since 1983 when total loans disbursed fell by 57 per cent from $61 million (in 1982) to $26 million (Table 4.3). The value of loans disbursed fell again in 1984 (by 5.8 per cent). The decline in disbursement seemed to have levelled off in 1985 but the data suggests a 20 per cent decline in disbursement in 1986. The sharp reduction in 1983 heralded a period of reduced Government support and the further reduction in 1986 marked the almost total removal of Government support.

It was suggested in 1981[1] that default may well prove to be a problem faced by the ADB in the future. The 1976 annual report indicated that, of 3,243 loans outstanding, 2,286 were in default. That situation could only continue in a period of strong financial support by Government. The Bank has sought to correct the default situation in recent years, especially in the light of severely reduced Government support. Collections amounted to $25.3 million in 1986; the writer was unable to obtain data on the default situation in 1986.

1. "Review of the Agricultural Sector of Trinidad and Tobago" op cit Noble 1981.

ABSTRACT OF BUDGETED RECURRENT EXPENDITURE SELECTED MINISTRIES: 1985-1987

TABLE 4.2

$ Million

Ministry	1985 Actual	% of Total	1986 (Rev Est)	% of Total	1987 (Estimates)	% of Total	1987 Estimates/ 1986 Revised Estimates Increase	Decrease
Ministry of Food Production, Marine Exploitation, Forestry and the Environment	235.4	(4.7)	240.3	(4.4)	223.5	(3.8)	-	16.8
Ministry of Education[1]	921.9	(18.5)	972.3	(17.6)	932.3	(15.7)	-	40.0
Ministry of Health, Welfare and the Status of Women	772.7	(15.5)	818.4	(14.8)	878.8	(14.8)	60.4	-
Ministry of Works, Settlement and Infrastructure	483.8	(9.7)	540.8	(9.8)	541.5	(9.1)	0.7	-
TOTAL	4,977.7	(100.0)	5,515.6	(100.0)	5,944.9	(100.0)	429.3	-

Source: "Draft Estimates of Expenditure for the Year 1987" Government Printery, Trinidad and Tobago - 1987.

1. Includes Industrial Schools and Orphanages.

AGRICULTURAL DEVELOPMENT BANK: LOAN DISBURSEMENTS: SELECTED YEARS

TABLE 4.3

$000

	1975 (Jan-Sept)	1980	1981	1982	1983	1984	1985	1985 (Jan-Sept)	1986 (Jan-Sept)
Crop	...	4,966	4,008	4,436	2,772	2,232	2,653	1,860	1,263
Fish/Fish Products	...	2,295	1,633	2,080	1,581	1,194	1,486	1,141	689
Dairy	...	1,303	475	577	308	116	416	302	264
Poultry and Meat	...	8,930	11,074	15,661	4,642	6,127	3,151	2,001	1,763
Land Acquisition	...	4,201	6,903	11,952	2,991	1,663	1,198	1,179	274
Forestry	...	315	1,155	282	1,500	5	304	304	3
Agro-Industry	...	353	143	46	79	148	957	850	556
Marketing	...	-	-	-	-	1,037	861	-	447
Buildings	...	3,282	3,681	3,226	2,421	3,915	1,714	1,643	283
Machinery, Equipment, Vehicles	...	9,181	11,020	8,091	4,069	5,379	3,003	2,586	538
Infrastructure	...	1,148	773	651	454	912	948	911	136
Refinancing of Existing Loans	...	3,559	3,760	11,282	5,273	864	5,643	5,454	6,868
Agric Co-op Societies	...	1,324	1,695	2,491	176	1,128	1,773	1,690	719
Other	...	2,527	20	23	129	133	613	474	2,274
TOTAL	4,200	43,384	46,340	61,344	26,395	24,853	24,724	20,393	16,077
% Change over previous year	-	-	+ 6.8	+ 32.4	- 57.0	- 5.8	- 0.5	-	-21.1

Source: "Annual Statistical Digest" op cit 1986.

... - Not available.

A significant development in recent years and of potentially as much importance as default is the situation regarding re-financing. Of the amount disbursed in 1986, 58 per cent or $9 million was used to re-finance existing loans. The re-financing has been deemed necessary because of "repayment difficulties faced by a number of farmers in the light of increases in domestic agricultural production and a fall in agricultural prices".[1] The statement does not explain the failure of increased production/sales to maintain or increase gross revenue even with the advent of lower prices. In any event 216 loans, amounting to $89 million, have been rescheduled to date.

The crucial role of credit in any urgent programme of agricultural diversification and the development of agro-industry requires that the loan portfolio of the ADB be properly managed so as to attract increased funding from Government or international lending agencies.

1. "Review of the Economy" Op cit 1986 p.47

THE AVAILABILITY OF INPUTS

(a) Fertilizers

Production of fertilizers in Trinidad and Tobago increased steadily from 0.3 million tonnes in 1975 to 0.7 million tonnes in 1980, and after a slight decline in 1981, again increased steadily to reach 1.7 million tonnes in 1985 (Table 4.4). Exports increased in tandem with production and, after declining slightly in 1981, rose to 1.4 million tonnes in 1985.

Imports of fertilizer, after being fairly constant at less than 10,000 tonnes for a long time, suddenly jumped to 122,000 tonnes in 1981. It seems that this excess fertilizer was used over the years 1982 and 1983 and increased imports were not necessary until 1984. In any event, there has been a marked increase in the domestic "disappearance" of fertilizer since 1983 and this coincides with the known upsurge in agricultural production.

(b) Animal Feeding Stuff

Imports of animal feed stuff rose from 210,000 tonnes in 1975 to 300,000 tonnes in 1980. There was an increase in imports of over 100 per cent to 603,000 tonnes in 1981 after which imports fell in 1982 to a level just 16 per cent above the 1980 level. In recent years, imports have fallen from 333,000 tonnes in 1984 to 261,000 tonnes in 1985.

The surge in the volume of animal feed stuff imported in 1981/1982 seems to be related to the entry of a new poultry processor into the industry which pushed poultry production from 26 million kgs in 1981 to 38 million kgs in 1982 (Table 5.7) There was no significant increase in the production of beef, pork or mutton over that period.

(c) Agricultural Machinery

The value of agricultural machinery imported rose rapidly from $3 million in 1975 to $12 million in 1980. The period of rapid expansion of agricultural plant was by then over, and the value of imports remained stable at $10 - $12 million per year until 1983 (Table 4.6) There was then a reduction in the value of imports in 1984 and 1985 of 26 per cent and 41 per cent respectively. The value of imports of agricultural machinery in 1985 was $5 million.

The reduced value of imports of agricultural machinery since 1983 is to be expected in the light of the down-turn in the economy, the reduced availability of credit (especially from the Agricultural Development Bank) and, indeed, an unwillingness of farmers to invest in an uncertain economic climate.

It will be seen in Chapter Five that increased production was achieved by the agricultural sector. It would seem that this was achieved without the use of new machinery, possibly by the use of improved varieties and increased fertilizer use. It is not surprising to note that imports of tractor spares increased by about 300 per cent in 1985.

AVAILABILITY OF FERTILIZERS IN TRINIDAD AND TOBAGO, FOR SELECTED YEARS

TABLE 4.4

'000 TONNES

Year	Production	Exports	Imports	Total Available	% Change Over Previous Year
1975	346	259	6	93	-
1980	687	614	9	82	- 11.8
1981	555	494	122	183	+123.2
1982	940	851	8	97	- 47.0
1983	1,274	1,213	8	69	- 28.9
1984	1,458	1,282	21	197	+185.5
1985	1,661	1,449	18	230	+ 16.8

Source: "Annual Statistical Digest" op cit 1985.

IMPORTS OF FEEDING STUFF FOR ANIMALS, FOR SELECTED YEARS

TABLE 4.5

'000 TONNES

Year	Maize	Oats	Wheat Grains	Hog and Fodder[3]	Bran Pollard[1]	Oil Seed[2]	Commercially Mixed Grains	Commercially Mixed Meals	Bone Meals and Other n.e.s.	TOTAL
1975	78	-	110	-	-	19	2	-	1	210
1980	97	1	116	-	4	30	38	2	12	300
1981	369	3	98	-	4	34	81	13	1	603
1982	116	1	96	-	8	42	72	8	4	347
1983	63	1	91	-	5	31	96	3	3	293
1984	121	1	98	-	5	35	71	-	2	333
1985	77	1	79	-	5	28	65	2	4	261

Source: "Annual Statistical Digest" op cit 1984, 1985

1. Bran, Pollard, Sharps and other By products from the preparation of cereals.

2. Oil seed cake, meal and other vegetable oil residues.

3. Less than 50 tonnes per year

n.e.s. - Not elsewhere specified

VALUE AND SUPPLY[1] OF AGRICULTURAL MACHINERY: SELECTED YEARS

TABLE 4.6

Year	Total Value of Machinery Imported ($000)	Ploughs (No)	Harrows, Cultivators (kg)	Fertilizer Distributors Seed (kg)	Poultry Keeping Machinery (kg)	Tractors	Tractor Parts (kg)	Other (kg)
1975	2,617.8	15	...	...	...	25	220,952	...
1980	11,940.6	102	8,645	5,857	189,170	65	212,544	24,535
1981	11,208.0	64	26,385	2,932	231,264	110	230,436	13,618
1982	10,443.2	87	38,925	10,434	152,517	33	304,603	24,933
1983	11,629.5	180	48,209	11,604	163,144	115	288,547	391
1984	8,566.1	212	26,075	7,625	145,280	102	190,849	262
1985	5,043.8	24	10,819	20,110	112,790	-	690,491	676

Source: "Annual Statistical Digest" op cit 1984, 1985

1. Imports are regarded as supply. Local production of agricultural machinery is negligible.

... No available.

CHAPTER FIVE

PRODUCTION

- EXPORT CROPS
- DOMESTIC PRODUCTION
- FOOD PROCESSING

Total agricultural production grew by 5 per cent in 1985 when increases in real output were recorded in all sub-sectors (sugar, non-sugar, export[1] and domestic) (Table 2.5). Real growth in 1986 was restricted to 2.5 per cent, largely the result of a decline in real output by the non-sugar export sub-sector which almost cancelled the positive effects of the recently vibrant sugar sub-sector and the domestic sub-sector which continued the steady growth that has become a feature of recent years.

"The trend towards improved output in the agriculture sector, which persisted into 1986 was largely on account of the increasing attraction of the sector as a source of employment in the light of the general down-turn in the economy."[2] In addition, other factors such as rehabilitative efforts, favourable weather conditions and improved institutional and physical infrastructure also contributed.

This overall vibrance in the agricultural sector seems therefore to be the result of circumstances. The increased vibrancy in agriculture may be precisely the result of a depressed petroleum sector coming as it does after a period of sustained prosperity in the economy which left a situation of generally higher incomes and demand as well as a still liquid government able to apply necessary subsidies and other institutional support.

Much has been said of the need to restructure the economy of Trinidad and Tobago in the light of the "new realities". The debate inevitably leads to calls for increased emphasis on the agricultural sector with its potential for earning/saving foreign exchange and absorbing labour. The various sub-sectors of agriculture (export, domestic) have different potentials for achieving these ends.

It may be convenient therefore in this chapter to examine production for export as well as for domestic consumption.

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1. Includes citrus and copra.
2. "Review of the Economy" op cit 1986 p.18.

EXPORT CROPS

(a) Sugar

Sugar has been the single most important agricultural commodity produced in Trinidad and Tobago over the last fifty years. The date in Table 5.1 shows that sugar, except for a brief fall in 1982, has accounted for slightly more than two per cent (on average) of GDP (current prices) since 1970. This performance serves to underline the continuing importance of sugar production to the economy and the urgency with which the chronic problem of low production must be addressed.

The problems of the sugar industsry are best illustrated by examination of production data (Table 5.2) and GDP (Constant 1970 Prices) (Table 5.3).

Sugar production fluctuated at about 200,000 tonnes per year until 1976. Production then declined to 69,700 tonnes in 1984. A slight improvement in production was achieved in 1985 and 1986 when output reached 92,300 tonnes (Table 5.2). The generally declining level of production is reflected in the declining contribution of sugar to GDP in real terms (Table 5.3). The contribution of sugar to GDP (1970 prices) fell from $47 million in 1970 to $28 million in 1986, the percentage contribution in those same years fell from 2.8 per cent to 1.2 per cent.

Many reasons have been advanced to explain this spectacular reduction in production over the past ten years. The argument may, for convenience, be grouped as being "internal" and "external", although the two areas are obviously linked.

The "internal" problems of the sugar industry of Trinidad and Tobago are based essentially on issues relating to labour.

The years since 1971 have been marked by a rapid increase in average earnings in the sugar industry.[1] This rapid increase in earnings did not attract skilled labour to the sugar industry as earnings continued to be higher in the petroleum industry; indeed the wage increases were obtained as a result of protracted and bitter disputes which severely disrupted the ability of the company to process the sugar crop.[2]

The shortage of skilled labour, which has lead to poorly maintained plant and equipment, combined with bitter labour disputes, work stoppages and an overall inability to control cost has placed the industry in a perilous financial state. The industry survives at present solely through Government support which reached $200 million in 1981.[3]

Payment of such high levels of subsidies to the sugar industry is justified largely on the grounds that it is directly responsible for the livelihood of 25,000 farmers and workers in a geographically and ethnically concentrated area of central Trinidad. Another argument used in 1978 was based on the foreign exchange earnings/savings that accrue from the activities of the sugar industry.[4]

Efforts to restructure or turn around the sugar industry must however address the "external" issues. The current low levels of demand and prices seem to be anything but temporary. Caroni Ltd has consequently launched on a programme of diversification since 1982, and targeted for completion

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1. "The Erosion of Agriculture in an Oil Economy: The case of Export Crop Production in Trinidad". op cit Pollard p 829.

2. Caroni (1975) Ltd., wholly owned by the Government of Trinidad and Tobago.

3. "The Erosion ... " Pollard op cit p 828.

4. "Report of the Committee to consider the Rationalization of the Sugar Industry, Vols I and II December 1978 p 19.

PER CENT CONTRIBUTION OF SUGAR TO GDP (CURRENT PRICES)
SELECTED YEARS

TABLE 5.1

	1970	1975	1982	1983	1984	1985	1986
Sugar	2.9	2.4	0.5	2.1	2.0	1.9	2.3
Non-Sugar Export Agriculture	3.0[1]	2.3[1]	0.2	0.1	0.1	0.2	0.2
Domestic Agriculture			1.6	1.9	2.3	2.5	3.0
TOTAL AGRICULTURE	5.9	4.7	2.4	4.1	4.4	4.6	5.5

Source: Derived from data contained in "Review of the Economy" op cit Appendix 22.

1. Includes non-sugar export and domestic production.

SUGAR PRODUCTION; 1970-1986

TABLE 5.2

'000 Tonnes

YEAR	PRODUCTION
1970	219.5
1972	234.6
1974	186.3
1976	203.6
1978	147.0
1980	112.1
1982	79.9
1983	77.4
1984	69.7
1985	80.9
1986	92.3

Source: (i) "Review of the Agricultural Sector of Trinidad and Tobago" op cit Noble.

(ii) "Review of the Economy" op cit 1985, 1986.

in 1990. The programme involves the production of cereals (mainly rice), root crops and the development of beef and dairy herds.[1]

Diversification however does not necessarily involve movement away from the products of the sugar cane. Study of the data in Table 5.4 shows the rapid increase in the value of rum exported since 1970. It has been suggested that the sugar (cane) industry should aim to:

(a) increase production of high-valued products, such as rum and other alcohols;

(b) consistently satisfy the lucrative guaranteed markets for sugar;

(c) satisfy the growing market for sugar in Trinidad and Tobago including the food processing industry.

In addition investment should be directed towards productive agricultural investments in the "sugar cane belt" to absorb the labour released by the use of more efficient production methodologies in the sugar industry.

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1. "Review of the Economy 1986" op cit p 18.

ANNUAL CONTRIBUTION OF SUGAR TO GDP (1970 PRICES) FOR SELECTED YEARS

TABLE 5.3

$ Million

ACTIVITY	1970	1975	1982	1983	1984	1985	1986
Sugar	47	24	29.1	27.4	26.1	26.4	28.0
Non-Sugar Exp Agriculture	49[1]	60[1]	7.3	5.9	5.3	7.1	6.1
Domestic Agriculture			45.7	46.0	47.3	49.2	50.7
TOTAL AGRICULTURE	56	84	82.1	79.3	78.7	82.7	84.8
Manufacturing	141	186	312.2	290.6	252.6	216.5	227.8
Other non-petroleum	1,025	1,135	2,312.3	2,119.9	1,775.4	1,701.8	1,540.6
TOTAL NON PETROLEUM	1,262	1,405	2,706.6	2,489.8	2,106.7	2,001.0	1,853.2
Petroleum	361	1,267	300.2	281.3	310.1	345.0	342.7
GDP	1,623	2,672	3,006.8	2,771.1	2,416.8	2,346.0	2,195.9

Source: "Review of the Economy" op cit 1986.

1. Includes non-sugar export as well as domestic agriculture.

EXPORTS OF SUGAR AND SELECTED BY-PRODUCTS FOR SELECTED YEARS

TABLE 5.4

$000

YEAR	SUGAR	MOLASSES (RAW)	RUM	TOTAL
1970	42,637.0	3,240.8	2,171.4	48,049.2
1975	166,305.9	2,288.6	8,212.2	176,807.2
1982	52,474.6	2,471.6	13,803.6	68,749.8
1983	60,526.0	1,447.4	9,578.5	71,551.9
1984	60,610.8	1,718.0	12,364.8	74,693.6
1985	51,068.0	1,492.1	10,447.0	63,007.1

Source: "Annual Satistical Digest" op cit p.150.

(b) Cocoa and Coffee

Cocoa, in the late 1970s, unlike sugar, seemed to have a bright future. World demand outstripped supply because of increased consumption, particularly in Eastern Europe, and normal increases in consumption in the Western Hemisphere. At the same time world production had tended to fall. There was, in fact, a response by cocoa producers in Trinidad and Tobago and there was a rapid increase in cocoa production up to 1975 when production reached 5 million kgs.

In general however, cocoa producers have failed to sustain this high level of production despite a premium paid for cocoa from Trinidad and Tobago. Production has fallen every year since 1975 to reach 1 million kgs in 1985, early data suggests a further fall of 3 per cent in 1986.

Cocoa and other tree-crop producers are plagued by high wage rates and generally high production costs. The data in Table 5.5 suggests that there has in general been little effort to expand production to take advantage of the prevailing high prices. Average yields per hectare remain far below the potential. With one exception[1], farmers have resorted to simply gathering such fruit as happen to be produced by trees that are badly neglected. Sharp increases in cocoa production that have been obtained in the past are an indication of the rapid response of cocoa trees to improved levels of husbandry.

The export data (Table 5.5) suggests that, because of the premium, most of the cocoa produced in Trinidad and Tobago is exported and presumably cheaper cocoa imported to satisfy the domestic food processing industry.

Coffee production, like cocoa, increased rapidly up to 1975, but production of this commodity, like that of cocoa, fell rapidly until 1984 when production was a mere 852,000 kgs. A combination of favourable weather

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1. "Erosion of Agriculture in an Oil Economy ..." Pollard op cit p 827.

and available labour lead to a bumper harvest of 2 million kgs in 1985. Early data suggests that this high level of production will not be repeated and production in 1986 is estimated to be as much as 37 per cent below the 1985 level.

PRODUCTION AND EXPORT OF COCOA AND COFFEE FOR SELECTED YEARS

TABLE 5.5

'000 kg

YEAR	C O C O A		C O F F E E	
	PRODUCTION	EXPORT	PRODUCTION	EXPORT
1973	3,162	n.a.	2,717	n.a.
1975	5,240	n.a.	4,024	n.a.
1981	3,145	2,910	2,433	1,056
1982	2,247	1,906	1,794	1,574
1983	1,732	1,619	1,389	859
1984	1,560	1,500	852	-
1985	1,307	1,306	2,141	755
1985 (Jan-June)	1,128	1,169	2,080	526
1986 (Jan-June)	1,089	1,108	1,304	416

Source: "Review of the Economy" op cit 1986.

PRODUCTION OF TREE-CROPS FOR DOMESTIC CONSUMPTION

TABLE 5.6

YEAR	CITRUS [1] (000 kg)	LIMES (000 kg)	COPRA (tonnes)
1977	3,414.0	n.a.	9,008
1979	6,938.0	n.a.	6,838
1980	6,665.0	n.a.	4,936
1982	1,836.0	167,931.0	5,666
1983	2,939.0	198,668.0	6,522
1984	3,264.0	159,091.0	5,528
1985	6,079.0	112,670.0	4,256
1986	6,370.8	111,543.3[2]	4,890[2]

Source: "Review of the Economy" op cit 1986

1. Excludes Limes

2. Estimated

n.a. - Not available.

DOMESTIC PRODUCTION

(a) Citrus

Citrus has ceased to be an export crop in Trinidad and Tobago, production in recent years being directed entirely towards the domestic market.

The production of citrus, like the other tree-crops, fell after the period 1979/80 and reached a low of 1.8 million kgs (excluding limes) in 1982 (Table 5.6). There has however, been a very strong increase in production since 1982 and though the rate of growth has slowed, production is expected to increase by nearly five per cent to 6.4 million kgs in 1986.

Drastic reductions in the production of citrus in the years just prior to 1982 may be attributed to disease,[1] nematodes, bees, birds, ants and the endemic shortage of labour. The period since 1982 has shown a heartening response by farmers to the "Citrus Rehabilitation Programme". These efforts by farmers and Government have been assisted in no small measure by favourable weather and the recent increase in labour availability to the agricultural sector.

The production of limes, though at a substantially higher level than other citrus (Table 5.6), has displayed the malady of other tree-crops, and production since 1982 has fluctuated about a downward trend. This trend has not been arrested by the programme of rehabilitation, the favourable weather or the increased availability of labour. It has been suggested[2] that this decline is due to declining hectarage, possibly the result of residential encroachment on citrus (limes) lands.

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1. The plant stock delivered to farmers from Government nurseries was contaminated with a virus (Pollard) op cit.

2. "Review of the Economy" op cit 1986 p.20.

(b) Copra

Copra, like citrus, has ceased to be an export "crop" in Trinidad and Tobago. Like all the other tree-crops, copra has in the past been plagued by the combined ravages of disease[1] and the unavailability of labour.

The production of copra fell rapidly from 9,000 tonnes in 1977 to 7,000 tonnes in 1979 (Table 5.6) and has fluctuated at a relatively stable output of 4,000 to 6,000 tonnes since then. Fluctuation in the output of copra is due, as with other tree crops, to periodic "surges" of improved husbandry on the part of individual estate owners and the consequential increases in output. The data does not, as yet, reveal a sustained increase in output in recent years as a result of the increased availability of labour. This is probably because the labour displaced from other sectors has not yet migrated to the more remote coconut farms of Mayaro/Manzanilla and the Cedros peninsular.

The coconut industry (copra and coconut oil) however, has, unlike the other tree-crops, even more fundamental challenges than diseases and the availability of labour. There has, in recent years, been widespread concern among consumers about the health aspects of the use of coconut oil as a food. The potentially fatal blow has been exacerbated by the simultaneous availability of cheap substitute oils, particularly soya.

Coconut farmers in Trinidad (Tobago does not produce copra but has potential for the "green nut" trade) must therefore explore avenues of survival that may include combinations of greater mechanization of their farms and the increased exploitation of other products including coconut oil for cosmetics and the "green nut" trade.

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1. Cedros Wilt, Red Ring, Coconut Mite, a pest that is endemic in the Eastern Caribbean and South America, has fortunately not yet become established in Trinidad and Tobago.

(c) Livestock Production

Trinidad and Tobago, like the other Member States of the Caribbean Community, is still not self-sufficient in most livestock products. These products together account for the bulk of the value of food imports and thus provide tremendous opportunity for reducing the food import bill. In the specific case of Trinidad and Tobago, this group of products also constitutes one avenue for the generation of high-earning employment to absorb labour released by other sectors of the economy.

(i) Poultry

Trinidad and Tobago achieved self-sufficiency in poultry meat in the mid 1970's.[1] Since that time, a combination of increasing demand and declining production resulted in the importation of 2.7 million kgs of poultry meat in 1980 when domestic production fell to 23.5 million kgs or just 29 per cent of the 1977 level of production (Table 5.7).

Production increased slightly in 1981 to 25.6 million kgs and there was a reduction in the amount imported. The volume of poultry meat produced jumped dramatically in 1982 to 37.5 million kgs and has remained at or about 34 million kgs since then. A slight contraction in production was observed in 1986 and this may be due to reduced demand resulting from the general down-turn in the economy.

The high and sustained levels of production attained since 1982 reflect increases in plant capacity and generally improved marketing arrangements which have better coordinated supply and demand to remove the glut and shortages that characterized 1980 and 1981. The net result is that imports of poultry meat, even when the volume doubled in 1985 over 1984, still amounted to just 34,000 kgs.

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1. "Review of the Economy" 1982 op cit p.23.

Trinidad and Tobago has achieved practical self-sufficiency in poultry meat: an occasional low level of imports is probably inevitable to cover production shortfalls by a few producers. The time is probably right for poultry producers in Trinidad and Tobago to expand into the intra-regional market.

(ii) Hatching Eggs

The broiler (poultry meat) industry in Trinidad and Tobago is still based primarily on imported hatching eggs although there have been admirable efforts to increase domestic production of hatching eggs.

The production of hatching eggs in Trinidad and Tobago had fallen in 1982 to as low as 1.3 million eggs and in 1983 imports of hatching eggs peaked at 45 million eggs. There have been increases in domestic production and a resulting fall in every year since then, and domestic production and imports are estimated to be 8.6 million and 27 million respectively in 1986 (Table 5.7). Such a level of imports would be the lowest since 1977. The data does suggest therefore that domestic production of hatching eggs has responded to the increased sophistication of the domestic market for poultry meat and has possibly achieved the maximum level of output possible pending an injection of capital similar to earlier investments in the meat processing sector.

(iii) Table Eggs

The production of table eggs, which was 5 million dozens in 1977, fell steadily to 2 million in 1984. The decline has been arrested and production is expected to reach 3.6 million dozens in 1986, still substantially below the 1977 level (Table 5.7).

POULTRY AND EGGS: PRODUCTION AND IMPORTS FOR SELECTED YEARS

TABLE 5.7

YEAR	BROILERS		TABLE EGGS		HATCHING EGGS	
	PRODUCTION	IMPORTS	PRODUCTION	IMPORTS	PRODUCTION	IMPORTS
	(liveweight) 000kg	000 kg	000 doz	000 doz	000	000
1977	33,029	461	4,997	15	3,216	19,862
1980	23,464	2,672	3,487	24	2,725	33,218
1981	25,646	2,109	3,557	3	1,980	33,776
1982	37,522	859	n.a.	6	1,323	36,270
1983	34,267	11	3,142	0	3,415	44,551
1984	33,919	14	2,292	0	3,720	38,349
1985	34,232	34	2,958	0	4,253	39,062
1986	32,178[1]	-	3,868[1]	0	8,625[1]	27,226[1]

Source: "Review of the Economy" op cit 1982, 1985, 1986

1. Estimated

n.a. - Not Available.

The data shows no imports of table eggs since 1983. The variations in the level of production, and thus supply, since 1983, suggests a possible diversion of hatching eggs to the table market.

(iv) Meat (Other than Poultry)

The production of meat (other than poultry) increased steadily until 1984 when output reached 4.9 million kgs. Output fell by 7 per cent in 1985 and was estimated to fall again in 1986 to 4 million kgs (Table 5.8).

Much of the variation in total production was caused by variation in pork production which increased until 1984 but has fallen since from 3.5 million kgs in 1986 to 3.4 million kgs in 1985. The decline is expected to continue. The magnitude of the decline has however been worsened by a simultaneous decline in beef production which has fallen for three consecutive years after a period of relative stability.

Declining production in beef, pork and even mutton has been attributed to financial constraint faced by farmers in the State Lands Development Project, marketing problems and the general down-turn in the economy which has lowered demand generally and certainly for high-valued meat products.

(v) Milk

Milk production, like the broiler industry, is a success story of the livestock sub-sector. Output has increased in every year since 1980 to reach 11 million litres in 1986 (Table 5.9). The upturn in fresh milk production has been strongly associated with improved animal husbandry and higher grades of pastures. The State Lands Development Project has been very effective in this area and accounts for 60 per cent of fresh milk production.[1]

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1. "Review of the Economy" 1986 op cit p.22.

(d) Fish

The production of fish fell sharply from 3 million kgs in 1977 to 2 million kgs in 1980. Production recovered and the 3 million mark was again reached in 1984. There was a 7 per cent fall in production in 1985 but early estimates indicate increased production in 1986 (3 million kgs) (Table 5.9).

MEAT (OTHER THAN POULTRY): PRODUCTION AND IMPORTS FOR SELECTED YEARS

TABLE 5.8

00 kgs

YEAR	BEEF/VEAL		PORK		MUTTON		TOTAL		Consumption	Production as % of Consumption
	Production	Imports	Production	Imports	Production	Imports	Production	Imports		
1977	1,312	5,549	2,615	290	72	908	3,000	6,746	10,745	37.2
1980	2,013	5,671	1,790	1,179	79	1,388	3,880	8,237	12,117	32.0
1981	1,746	7,226	1,613	1,652	76	1,379	3,435	10,270	13,705	25.1
1982	1,648	9,284	2,931	854	67	2,219	4,646	12,357	17,003	37.6
1983	1,396	8,142	3,519	970	67	2,366	4,982	11,468	16,260	30.6
1984	1,375	8,964	3,553	159	59	3,034	4,987	12,157	17,144	29.1
1985	1,236	9,469	3,364	480	51	2,375	4,651	12,324	16,975	27.4
1986	1,200[1]	4,962[1]	2,812[1]	159[1]	55[1]	1,550[1]	4,067[1]	6,671[1]	10,738[1]	37.9

Source: "Review of the Economy" op cit 1982, 1985, 1986

1. Estimated.

PRODUCTION OF MILK AND FISH FOR SELECTED YEARS

TABLE 5.9

YEAR	MILK 000 Litres	FISH 000 kgs
1977	5,868	3,162
1980	5,681	2,229
1981	5,841	3,124
1982	7,848	3,965
1983	9,017	3,545
1984	10,065	3,043
1985	10,557	2,845
1986	10,958[1]	2,928

Source: "Review of the Economy" op cit 1982, 1985, 1986.

1. Estimated.

(e) Fruit,[1] Vegetables: Roots/Starches

It has always been difficult to obtain reliable data on production in this large and diverse sub-sector. Production is characterised by a large number of sometimes very small producers who dispose of their produce in a large number of sometimes very imaginative ways.

In the absence therefore of reliable data, activity in this sub-sector will be assessed by recourse to GDP data and the movement of prices.

The contribution of domestic agriculture[2] to GDP (Current Prices) increased from $313 million in 1982 to $519 million in 1986. This was a very impressive performance and domestic agriculture, which in 1970 contributed 3 per cent of GDP (Current Prices) and as little as 1.6 per cent in 1982, had increased in importance to contribute again 3 per cent in 1986.

The data on contribution by the sub-sector to GDP (Current Prices) may be examined in conjunction with the data on GDP (Constant 1970 Prices) (Table 5.3) and data on prices (Table 5.10). It will be seen that the contribution of the domestic sub-sector, even at 1970 prices, increased from $46 million in 1982 to $51 million in 1986 (Table 5.3).

This performance is even more impressive when it is realized that the prices of most food crops fell over the period 1984 to 1986. The prices of roots/starches which fell in 1986 relative to 1984 have in fact increased over the 1985 levels. This relative "stickiness" in the price of root crops compared to the sometimes drastic fall in prices of say, tomatoes and cauliflower seems due to the longer "shelf-life" of roots/starches and the "ballast" in supply provided by the huckster trade.

The overall decline in prices of food crops seems due largely to increased production as Trinidad and Tobago approaches a high level of self-sufficiency

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1. Except citrus.
2. All agriculture except: Sugar, Cocoa, Coffee, Citrus.

in these commodities. It is unfortunate that this high level of production should coincide with a general down-turn in the economy which would tend to depress demand and prices, and may thus force food-crop prices to a level that is lower than the production costs of some marginal producers who will then be forced to withdraw from production.

AVERAGE WHOLESALE PRICES FOR SELECTED FOOD CROPS
1984 - 1986

TABLE 5.10

$/kg

CROPS	1984	1985	1986
VEGETABLES			
Tomatoes	5.09	4.37	3.31
Cabbages	2.71	2.94	2.94
Melongene	2.05	2.05	1.26
Sweet Pepper	6.25	6.34	4.33
Cucumber	1.61	1.27	1.09
Cauliflower	5.44	5.68	3.95
Pumpkin	1.53	2.20	1.30
ROOTS/STARCHES			
Cassava	2.25	1.72	1.88
Dasheen	1.90	1.81	1.88
Yam	1.75	1.39	1.49
Plantain	2.41	2.04	1.98
FRUITS			
Banana	2.37	2.70	1.85
Pineapple	4.68	4.09	3.97
Watermelon	1.80	1.71	1.56

Source: Agricultural Development Bank
Agricultural Planning Division.

(Taken from "Review of the Economy" op cit 1986 p 24.)

FOOD PROCESSING

Some measures of the extent of investment in food processing may be obtained from Table 5.11. Trinidad and Tobago is shown to have accumulated as much as $344 million invested in machinery and food-processing equipment in the sub-sector. The direct impact of this investment on the agricultural sector of Trinidad and Tobago has been questioned many times and the charges of a high import content within the food-processing industry are well known. It is important however to note the existence of the investment and to note that carefully chosen investments (as with the increased production of hatching eggs in the poultry industry) may radically transform a formerly import-based industry to a higher level of use of local inputs.

Charges of the heavy import base of the food-processing industry of Trinidad and Tobago, while still generally true, do not however give the entire picture. The industry has attracted a large number of small operators who produce a wide range of products as well as a few larger producers who do in fact tend to be heavily import based.

Table 5.12 sets out an approximate scheme of the present distribution of investment in the food-processing industry. Observation over time suggests that the import content of the industry is not homogenous. There is in fact a much lower use of imported raw material evident among smaller operators with the high import levels evident among the larger operations.

Food processing declined in 1984 and 1985 by 2 and 9 per cent respectively. Early data for 1986 suggests that the trend has been reversed and there was a slight increase in production in 1986 (Table 5.13). The slight increase is due primarily to increased production in the dairy and bakery industries.

It is interesting to note that the index of production of food-processing increased more (since 1977) than the all items index. This is due to the launching of new lines by producers of non-alcoholic drinks, bakery and dairy products, and the installation of new machinery by these producers.

ESTIMATED LEVELS OF INVESTMENT TO 1983 IN THE AGRO PROCESSING SECTOR : SELECTED SUB-SECTORS

TABLE 5.11

INDUSTRY	$million
Slaughtering, preparing/preserving meat	23.3
Manufacture of dairy products	67.1
Canning, Preserving, Processing fruit and vegetables	56.0
Canning, etc. fish and crustacea	54.4
Manufacturing of vegetable and animal oils and fats	15.2
Manufacturing of cocoa, chocolate and sugar confectionary	34.9
Manufacturing of other food[1]	49.5
Manufacturing of animal feeds	43.5
	343.9

Source: Survey conducted by the Industrial Development Corporation: In "Food Security in Trinidad and Tobago", E. Patrick Alleyne: Workshop on Food Systems and Food Policy Analysis, 16-18 December 1985, Port of Spain, Trinidad and Tobago.

1. Does not include the Sugar Industry.

NOTE: The table includes only that investment recorded by respondents to a questionnaire. No attempt was made to assess the level of investment by non-respondents. The data, in addition, does not include the Sugar Industry.

DISTRIBUTION OF INVESTMENT IN FOOD PROCESSING IN TRINIDAD AND TOBAGO

TABLE 5.12

SMALL	MEDIUM	LARGE
- Venegar and Diluted Acetic Acid Products	- Cocoa, coffee, tea imitation	- Alcoholic beverages
- Flavourings	- Vinegar and Diluted Acetic Acid Products	- Processed vegetables and vegetable products.
- Meat products)	- Flavourings	- Cereal and Cereal-based products
- Poultry products) Fresh, chilled	- Meat products)	- Confectionary
- Fish products)	- Poultry products) Chilled, frozen	- Snack foods
- Condiments, chutneys, sauces, etc.	- Fish products) Large distribution	- Dairy products
- Edible oils and nuts	- Non-alcoholic beverage concentrates	- Animal feeds
- Processed fruit and fruit products (home-based)	- Processed fruit and fruit products	
	- Confectionary	

INDEX OF DOMESTIC PRODUCTION, SELECTED SUB-SECTORS 1983 - 1986 (ANNUAL AVERAGE)

TABLE 5.13

1977 = 100

INDUSTRY	WEIGHT 1000	1983	1984	1985	1986 1st Qr	1986 2nd Qr
1. Food Processing Industries	88	132.8	130.7	119.6	120.0	124.3
Grain and Feed Mills						
Edible Oils and Fats	15	173.1	182.5	166.4	151.4	166.6
Bakeries	13	93.5	85.6	75.8	94.3	95.6
2. Drink and Tobacco	50	119.0	118.9	105.6	97.7	109.2
Tobacco	17	117.0	122.8	115.9	111.6	117.8
Alcoholic Beverages	19	107.4	104.0	85.2	77.8	85.8
Non-Alcoholic Beverages	14	137.3	134.4	121.0	107.9	130.4
Sugar	53	43.7	45.4	33.2	61.0	46.8
All Industry Index (Including Oil and Sugar)	1,000	116.6	111.0	106.6	122.9	136.1

Source: "Review of the Economy" op cit 1986 Appendix 33 (Extract)

CHAPTER SIX

THE TRADE IN FOOD PRODUCTS

- INTRA-REGIONAL TRADE IN FOOD PRODUCTS
- EXTRA-REGIONAL TRADE IN FOOD PRODUCTS
- BALANCE ON EXTRA-REGIONAL FOOD TRADE
- INTRA-REGIONAL FOOD IMPORTS AS A PERCENTAGE OF TOTAL FOOD IMPORTS

The balance of visible trade of Trinidad and Tobago fell from a positive balance of $2.2 billion in 1980 to a negative balance of $1.5 billion in 1982 (Table 2.8). The size of the deficit was reduced in 1983 to minus $0.5 billion and positive balances were achieved in 1984 and 1985.[1] (The trade balance of Trinidad and Tobago is discussed in Chapter Two).

The trade deficits resulted directly from sharp reductions in the price of oil and served to emphasize the growing dependence of the economy on a single export. The result has been a widespread acceptance of the need to diversify the production base of the economy.

This Chapter will examine the trade in food products and the contribution of the food deficit to the overall deficit. The examination will divide the trade in food into intra and extra-regional trade so as to differentiate between trade which represents economic integration within the Caribbean Community and is therefore desirable, and trade with the outside world.

INTRA-REGIONAL TRADE IN FOOD PRODUCTS

Trinidad and Tobago enjoys an overall trade surplus with the Caribbean Common Market (Table 2.13) This surplus was highest in 1980 when it totalled more than one-half billion dollars and fell to the comparatively small value of $171 million in 1984. The surplus has since risen again to $366 million in 1985.

(a) Intra-Regional Imports of Food

Imports from Caribbean Community Member States are dominated by food and light manufactures.[2] Imports of light manufactures rose rapidly from $27 million in 1975 to reach $191 million in 1983. This trade was then affected

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1. "Review of the Economy", op cit 1986 Appendix 74

2. Section 6 "Manufactured Goods Classified Chiefly by Material" and Section 8 "Miscellaneous Manufactured Articles"

INTRA-REGIONAL IMPORTS BY SITC SECTION, SELECTED YEARS

TABLE 6.1

$'000

SECTION	1975	1980	1981	1982	1983	1984	1985	1985 (Jan-Oct)	1986 (Jan-Oct)
0 Food and Live Animals	36,466	69,320	83,329	93,072	113,775	104,412	115,741	...	...
1 Beverages and Tobacco	5,236	10,588	12,117	17,014	14,506	10,296	6,846	...	...
2 Crude Materials, inedible except for fuels	2,118	8,581	10,746	14,673	11,879	13,413	12,773	...	...
3 Mineral Fuels, Lubricants and related Materials	34	890	405	1,342	29,993	378	203	...	...
4 Animal and Vegetable Oils and Fats	554	1,696	46	451	639	465	25	...	...
5 Chemicals	14,979	32,882	37,777	58,419	57,583	48,276	35,974	...	...
6 Manufactured Goods	13,876	41,526	51,410	56,688	67,777	60,002	27,370	...	...
7 Machinery and Transport Equipment	4,241	23,555	24,051	41,385	23,564	14,417	6,593	...	...
8 Miscellaneous Manufactured Articles	13,379	78,184	85,935	126,297	124,706	85,372	32,513	...	...
9 Miscellaneous Transactions and Commodities	226	730	290	567	748	465	446	...	...
TOTAL	91,109	267,952	306,106	409,908	445,120	337,496	238,484	194,100	167,000

Source: "Overseas Trade 1985", Central Statistical Office, Republic of Trinidad and Tobago.

... - Not available.

by the general reduction of imports, and fell by 24 per cent in 1984 to $145 million and by 60 per cent in 1985 to $59 million (Table 6.1).

Intra-regional imports of food proved to be more stable than the general trade over the period. The value of intra-regional food imports rose steadily from $36 million in 1975 to reach $113 million in 1983. Intra-regional imports of food were much less affected by economic conditions in 1983/84 and fell by just 9 per cent to $104 million in 1984. The value of intra-regional food imports has in fact increased by 11 per cent to $116 million in 1985. The stickiness of food imports is again demonstrated by examination of the composition of imports. Food accounted for 46 per cent of intra-regional imports in 1975. The rapid expansion of other categories of imports and the more sedate growth of the value of food imports caused a shift in the structure of intra-regional imports and in 1983 food accounted for just 26 per cent. Events since 1983 have again led to a repeat of the 1975 position where food imports accounted for 46 per cent of intra-regional imports.

Intra-regional imports of oils and fats are in fact a reflection of the malady of that industry in the Region. The value of imports fell from $1.7 million in 1980 to almost zero in 1985. Principal exporters of oils and fats to Trinidad and Tobago have been St Christopher and Nevis, Saint Lucia, St Vincent and the Grenadines and, to a lesser extent, Jamaica. There seems to be little hope of a revival of the coconut-based oils and fats industry. Efforts are however being made to stabilize the trade and diversity the industry.

The composition of intra-regional food imports is indicated by Table 6.2 which shows a decline in the value and importance of rice imports since 1983 and a corresponding increase in the value and importance of imports of vegetables.

A shift in the composition of intra-regional imports of food suggests a shift in the source of such imports. This is borne out in Table 6.3 which shows that in 1975 Guyana was the largest intra-regional exporter of food to Trinidad, accounting for 71 per cent of such imports in that year. The value of food imports from Guyana increased to reach $44 million in 1982 but at that time, the share of food imports from Guyana had fallen to 47 per cent. Guyana's share was eventually to fall to 27 per cent in 1985.

Imports of food from St Vincent and the Grenadines rose from $1 million in 1975, (4 per cent of intra-regional food imports) to $54 million in 1985, at which time it accounted for 46 per cent of intra-regional food imports.

There have been less dramatic but significant developments in food imports from Barbados, Belize and Jamaica. The value of food imports from Barbados ($1.6 million in 1975) had increased to $6.8 million in 1985. This is a significant development because Barbados is, like Trinidad and Tobago, traditionally regarded as a market for intra-regional food, not a supplier.

Food imports from Belize increased from $0.3 million in 1975 to $16 million in 1984. There has since been a sharp decline in 1985. Imports from Belize consist of preserved fruit and some fish. Food imports from Jamaica display the same pattern as with Belize, rising from $6 million in 1975 to a high of $17 million in 1982. There has been a sharp decline to $3 million in 1985.

(b) Intra-Regional Exports of Food

As was to be expected, intra-regional exports are dominated by mineral fuels, etc, which rose rapidly in dominance from 54 per cent of intra-regional imports in 1975 to 82 per cent in 1985 (Table 6.4).

INTRA-REGIONAL IMPORTS OF PRINCIPAL FOOD ITEMS

TABLE 6.2

	1983		1984		1985	
	$'000	% of Total I-R Food Imports	$'000	% of Total I-R Food Imports	$'000	% of Total I-R Food Imports
Rice	35,038	30.8	34,093	32.7	30,589	26.4
Vegetables, Fresh, Dry	22,440	19.7	26,642	25.5	48,833	42.2
Preserved Fruit and Preparations	14,573	12.8	17,068	16.3	8,514	7.4

Source: "Overseas Trade 1985", op cit.

INTRA-REGIONAL IMPORTS OF FOOD AND LIVE ANIMALS (SITC SECTION D)

BY COUNTRY OF ORIGIN

TABLE 6.3

($'000)

	1975	(%)	1980	(%)	1981	(%)	1983	(%)	1984	(%)	1984	(%)	1985	(%)
Antigua and Barbuda	-	-	65	(0.1)	40	-	136	(0.1)	305	(0.3)	158	(0.1)	97	-
The Bahamas	-	-	-	-	-	-	-	-	-	-	53	-	-	-
Barbados	1,612	(4.5)	6,003	(8.7)	7,980	(9.6)	8,077	(8.7)	10,283	(9.0)	7,734	(7.4)	6,805	(5.9)
Belize	345	(0.9)	13,634	(19.7)	6,634	(8.0)	13,233	(14.2)	13,774	(12.1)	16,443	(15.7)	7,884	(6.8)
Dominica	2	-	96	(0.1)	49	(0.1)	29	-	299	(0.3)	408	(0.4)	684	(0.6)
Grenada	516	(1.4)	1,110	(1.6)	2,249	(2.7)	3,589	(3.9)	8,514	(7.5)	8,246	(7.9)	9,574	(8.3)
Guyana	26,228	(71.0)	33,431	(48.2)	47,121	(56.6)	43,995	(47.3)	41,985	(36.8)	34,547	(33.3)	31,634	(27.3)
Jamaica	6,548	(17.7)	9,683	(14.0)	14,051	(16.9)	17,131	(18.4)	13,697	(12.0)	6,036	(5.8)	3,439	(3.0)
Montserrat	40	(0.1)	17	-	77	(0.1)	26	-	40	-	49	-	11	-
Saint Christopher and Nevis	1	-	-	-	248	(0.2)	52	(0.1)	339	(0.3)	1,479	(1.4)	1,645	(1.4)
Saint Lucia	158	(0.4)	862	(1.2)	603	(0.7)	820	(0.9)	754	(0.7)	322	(0.3)	318	(0.3)
St Vincent and the Grenadines	1,466	(4.0)	4,418	(6.4)	4,272	(5.1)	5,984	(6.4)	24,181	(21.0)	28,938	(27.7)	53,650	(46.4)
TOTAL	36,916	(100.0)	69,319	(100.0)	83,324	(100.0)	93,072	(100.0)	114,171	(100.0)	104,413	(100.0)	115,741	(100.0)

Source: "Overseas Trade 1985", op cit

The value of intra-regional exports of food increased from $36 million in 1975 to $70 million in 1980. Thereafter, the value declined in every year to reach $17.9 million in 1984. There was a slight increase in 1985.

The contribution of intra-regional food exports to total intra-regional exports fell from 11 per cent in 1975 to 10 per cent in 1980, 8 per cent in 1981 and 7 per cent in 1982. In 1983, the value of intra-regional food exports fell by 3 per cent to $42 million but that year the value of intra-regional exports fell by 18 per cent. The result was a strengthening of the level of contribution by food exports to 8 per cent. The brief respite was not sustained however and after a dramatic decline to $18 million in 1984, intra-regional food exports accounted for just 4 per cent of the total.

Table 6.5 lists some intra-regional food exports of Trinidad and Tobago. In every instance, the value of exports in 1985 was less than in 1983. It is noteworthy that agro-industry[1] accounted for 40 per cent of intra-regional exports in 1983, but this had risen to 79 per cent by 1985.

There was a significant shift in the direction of intra-regional exports of food over the period under review. At the start of the period (1975) the major destinations of intra-regional exports were Barbados, Guyana and Jamaica. At the end of the period, with drastic reductions in the value of imports from Jamaica ($11 million in 1975, $1.5 million in 1985) and Guyana ($6 million) there had been a significant shift to the Less Developed Countries (LDCs) of the Caribbean Common Market. As a group, the LDCs accounted for 49 per cent of intra-regional food exports (Table 6.6).

(c) Intra-Regional Food Trade Balance

Trinidad and Tobago, with declining intra-regional exports and increasing imports of food, has a large and increasing food deficit (in value terms) with the other Member States of the Caribbean Community.

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1. "Cereal preparations", "Preserved fruit and preparations", "Margarine and Shortening", "Food preparations n e s."

INTRA-REGIONAL EXPORTS BY SITC SECTION, SELECTED YEARS

TABLE 6.4

$'000

SECTION	1975	1980	1981	1982	1983	1984	1985	1985 (Jan-Oct)	1986 (Jan-Oct)
0 Food and Live Animals	35,782	69,830	55,450	43,637	42,198	17,988	18,078	...	...
1 Beverages and Tobacco	4,162	7,732	6,459	12,465	9,894	7,048	5,627	...	...
2 Crude Materials, inedible except fuels	1,354	738	206	180	409	659	1,489	...	...
3 Mineral Fuels, Lubricants and other related Materials	181,251	533,888	535,133	495,805	386,755	383,170	491,493	...	...
4 Animal, Vegetable Oils and Fats	390	1,265	409	97	150	18	44	...	...
5 Chemicals	36,941	46,987	45,068	41,687	31,929	21,108	18,399	...	...
6 Manufactured Goods	31,582	35,613	41,330	37,262	41,231	44,559	45,803	...	...
7 Machinery and Transport Equipment	13,687	9,190	8,012	14,565	12,008	7,267	6,733	...	...
8 Miscellaneous and Transport Equipment	30,503	19,796	18,017	10,816	12,998	8,620	8,120	...	...
9 Miscellansous Manufactured Articles	76	457	283	276	1,246	1,788	2,987	...	...
TOTAL	335,728	725,406	710,367	656,790	538,818	492,225	598,771	476,500	385,600

Source: "Overseas Trade 1985" op cit

... - Not available

INTRA-REGIONAL EXPORTS OF PRINCIPAL FOOD ITEMS - 1983-1985

TABLE 6.5

	1983		1984		1985	
	$'000	%[1]	$'000	%[1]	$'000	%[1]
Cereal Preparations	8,845	20.0	6,131	34.1	7,649	42.3
Coffee	2,785	6.6	1,675	9.3	1,769	9.8
Preserved Fruit and Preparations	3,570	8.4	2,166	12.0	1,632	9.0
Margarine and Shortening	962	2.1	614	3.4	858	4.7
Food Preparations n e s	4,151	9.8	2,382	13.2	2,367	13.1

Source: "Overseas Trade 1985" op cit.

1. % of all food exports

n.e.s. - Not elsewhere specified.

INTRA-REGIONAL EXPORTS OF FOOD AND LIVE ANIMALS (SITC SECTION 0)
BY DESTINATION

TABLE 6.6

$'000

	1975	%	1980	%	1981	%	1982	%	1983	%	1984	%	1985	%
Antigua and Barbuda	905	2.5	1,537	2.2	1,621	2.9	1,413	3.2	861	2.1	803	5.0	711	4.1
The Bahamas	-		-		-		-		21	0.1	26	0.2	68	0.4
Barbados	7,153	20.0	14,653	21.2	13,599	24.5	11,966	27.4	24,007	59.2	6,789	42.6	6,639	38.3
Belize	24	0.1	-		-		-		-		-		-	
Dominica	866	2.4	1,175	1.7	1,265	2.3	1,056	2.4	629	1.5	921	5.8	911	5.3
Grenada	3,998	11.2	4,428	6.4	4,085	7.4	4,306	9.9	2,577	6.3	1,958	12.2	2,193	12.6
Guyana	6,056	16.9	6,807	9.8	2,636	4.8	264	0.6	473	1.2	567	3.6	610	3.5
Jamaica	11,436	32.0	33,194	48.1	24,293	43.8	17,378	39.9	6,766	16.7	540	3.4	1,477	8.5
Montserrat	446	1.2	215	0.3	195	0.4	219	0.5	180	0.4	123	0.8	131	0.8
Saint christopher and Nevis	641	1.8	747	1.1	679	1.2	722	1.7	603	1.5	534	3.4	545	3.1
Saint Lucia	1,916	5.4	3,653	5.3	3,919	7.0	2,844	6.4	2.029	5.0	1,917	12.0	1,956	11.3
St. Vincent and the Grenadines	2,342	6.5	2,701	3.9	3,158	5.7	3,471	8.0	2,446	6.0	1,759	11.0	2,107	12.1
TOTAL	35,783	100.0	69,110	100.0	55,450	100.0	43,639	100.0	40,592	100.0	15,937	100.0	17,348	100.0

Source: Compiled from Tables 6.1 and 6.4

At the start of the period, Trinidad and Tobago had as may be expected, a food deficit with Belize and Guyana. The total deficit at that time was relatively small ($1 million) (Table 6.7). The situation remained the same until 1980 which saw a reduced total deficit ($0.2 million) and a significant shift to deficit in food trade with St Vincent and the Grenadines. This situation continued until 1983.

In 1985 Trinidad and Tobago had a food trade deficit with all Member States of the Caribbean Common Market except Antigua and Barbuda, Dominica, Montserrat and Saint Lucia. The total intra-regional food deficit in 1985 was $98 million.

EXTRA-REGIONAL TRADE IN FOOD PRODUCTS

(a) Extra-Regional Imports of Food

The balance of visible trade of Trinidad and Tobago (Table 2.8), recovered from a deficit of (minus) $1.5 billion in 1982 to a surplus of $1.5 billion in 1985. The data suggests that a reduced surplus was achieved in 1986.

Extra-regional imports of food, although amounting to considerable sums ($811 million in 1982, Table 6.8), did not amount for more than 10 per cent of total extra-regional imports until after 1983.

In the period since 1983, total extra-regional imports declined rapidly by 32, 26 and 18 per cent in 1983, 1984 and 1985 respectively. In 1985, the value of extra-regional imports had fallen to $3.5 billion, just slightly above the 1975 level of $3.2 billion.

Extra-regional imports of food reacted more slowly to the economic down-turn and remained fairly stable until 1985 when the value fell by 19 per cent to $648 million, and as a result food, as a percentage of extra-regional

INTRA-REGIONAL FOOD TRADE BALANCE: SELECTED YEARS

TABLE 6.7

$'000

	1975	1980	1981	1982	1983	1984	1985
Antigua and Barbuda	-905	1,472	1,581	1,277	556	645	614
The Bahamas	-	-	-	-	-21	-27	-68
Barbados	5,541	8,650	5,619	3,889	13,724	-945	-166
Belize	-321	-13,634	-6,634	-13,233	-13,774	-16,443	-7,884
Dominica	864	1,079	1,216	1,027	330	513	227
Grenada	3,482	3,318	1,836	717	-5,937	-6,288	-7,381
Guyana	-20,172	-26,624	-44,485	-43,731	-41,512	-33,980	-31,024
Jamaica	4,888	23,511	10,242	247	-6,931	-5,496	-1,962
Montserrat	406	198	118	193	140	74	120
Saint Christopher and Nevis	640	-747	431	670	264	-945	-1,110
Saint Lucia	1,758	2,791	3,316	2,024	1,275	1,592	1,638
St. Vincent and the Grenadines	876	-1,717	-1,114	-2,513	-21,735	-27,179	-51,543
Net Surplus/Deficit	-1,133	-209	-27,874	-49,433	-73,579	-88,476	-98,393

Source: Compiled from Tables 6.1 and 6.6

EXTRA-REGIONAL IMPORTS BY SITC SECTION SELECTED YEARS

TABLE 6.8

($'000)

	1975	1980	1981	1982	1983	1984	1985	1985 (Jan.-Oct.)	1986 (Jan.-Oct.)
0 Food and Live Animals	248,418	639,888	751,770	811,664	809,989	789,661	648,405	...	...
1 Beverages and Tobacco	12,308	74,253	67,110	78,816	86,223	49,942	26,735	...	...
2 Crude Materials, inedible except fuels	25,224	142,653	176,455	238,616	246,937	211,967	140,789	...	...
3 Mineral fuels, lubricants, related material	1,640,155	2,900,495	2,744,841	2,234,469	168,888	34,281	123,874	...	...
4 Animal and Vegetable Oils and Fats	19,772	43,408	41,069	40,918	37,793	52,313	50,046	...	...
5 Chemicals	135,005	349,490	345,331	375,821	383,235	371,022	318,876	...	...
6 Manufactured Goods	442,629	1,040,065	1,032,231	1,413,144	1,264,451	932,121	730,996	...	...
7 Machinery and Transport Equipment	530,470	1,893,681	1,652,638	2,832,067	2,268,603	1,376,197	1,128,640	...	...
8 Miscellaneous Manufactured Articles	90,217	299,712	333,467	429,833	465,988	438,802	318,924	...	...
9 Miscellandous Transactions and Commodities	8,400	13,269	11,036	13,100	13,698	16,101	13,204	...	...
TOTAL	3,152,598	7,396,914	7,155,948	8,468,448	5,745,805	4,268,412	3,500,489	2,769,200	3,860,200

Source: Compiled from data contained in various tables in "Overseas Trade 1985", op cit.

... Not available

imports rose to 18 per cent. The value of extra-regional food imports, at $648 million in 1985, was lower than the high levels of 1982/1983 but was above the 1980 level of $640 million, and well above the 1975 level of $248 million.

It is important to examine the composition of extra-regional imports of food. 1985 was typical and the value and per cent contribution of selected food groups are set out in Table 6.9. The products listed amounted to $462 million or 71 per cent of extra-regional food imports. It is noteworthy that, except for wheat, all the products may be produced in the Caribbean Community and all except for the grains (maize, animal feedstuff and possibly rice), may be produced in sufficient quantity in Trinidad and Tobago.

(b) Extra-Regional Exports of Food

Extra-regional exports of food, which accounted for 5 per cent of the value of extra-regional exports in 1975, accounted for less than 2 per cent in the years 1980 to 1985. This was due in part to the generally declining value of food exports which had a value of $191 million in 1975 and fell in almost every year to reach $70 million in 1985.

The reduced relative importance of food exports which occurred between 1975 and 1980 was also partly due to the rapid growth in the value of total extra-regional exports which rose from $3.5 billion in 1975 to $9.0 billion in 1980 (Table 6.10). Thereafter, the rate of decline of the value of extra-regional food imports just matched the declining value of total extra-regional exports.

The composition of extra-regional food exports is set out in Table 6.11. As expected, sugar, cocoa and coffee account for 88.7 per cent of extra-regional food exports. There are indications however that some of the "slack" may have been taken up by extra-regional exports of "non-traditional" export crops.

The value of exports of rum and bitters has been included in Table 6.11 for information. The significance of these exports to the agricultural sector is apparent when it is noted that total food (Section 0) extra-regional exports in 1985 amounted to $70 million, while extra-regional exports of rum and bitters amounted to $13 million or 19 per cent.

BALANCE OF EXTRA-REGIONAL FOOD TRADE

Trinidad and Tobago has a deficit on extra-regional food trade. The size of this deficit has increased from $57 million in 1975 to reach $744 million in 1983. The deficit has been reduced since 1983 to $578 million in 1985, (Chart 6.1). The size of the deficit has been reduced largely by the restriction of imports, the value of extra-regional exports of food has continued to fall.

INTRA-REGIONAL FOOD IMPORTS AS A PERCENTAGE OF TOTAL FOOD IMPORTS

Intra-regional food imports accounted for 13 per cent of total food imports in 1975 (Table 6.12). The value of food imported from all sources rose from $285 million in 1975 to $924 million in 1983. During this time, the value of food imported from Caribbean Community Member States rose from $36 million in 1975 to $114 million in 1983, (Table 6.1). The rate of the increase in the value of intra-regional food imports was however slower than the rate of total increase, and the contribution of intra-regional food imports fell from 13 per cent in 1975 to 10 per cent in 1982.

Developments since 1983 are extremely significant. The value of total food imports has fallen but the value of intra-regional imports has increased. The result is that intra-regional food imports accounted for 12, 11 and 15 per cent of total food imports in 1983, 1984 and 1985 respectively. The expansion of intra-regional food imports and the rapid expansion of extra-regional food imports since 1975 and their fairly rapid contraction since 1983 are set out graphically in Chart 6.2.

EXTRA-REGIONAL IMPORTS OF SELECTED FOOD PRODUCTS, 1985

TABLE 6.9

	$'000	% EXTRA-REGIONAL FOOD IMPORTS	% ALL EXTRA-REGIONAL IMPORTS
Maize, Unmilled	32,153	5.0	0.8
Wheat and Spelt, Unmilled	33,230	5.1	0.9
Milk, Condensed or Otherwise preserved	88,023	13.6	2.4
Meat and Meat Preparations	101,242	15.6	2.7
Fish, All Kinds	28,565	4.4	0.8
Rice	26,332	4.1	0.7
Vegetables, Fresh, Dry	82,121	12.7	2.3
Animal Feeding Stuff	69,903	10.8	2.0
Grapes, Apples, Dates, Other Stone Fruits, Pears Quinches	8,000	1.2	0.2

Source: Compiled from data contained in various tables in "Overseas Trade 1985" op cit.

EXTRA-REGIONAL EXPORTS BY SITC SECTION, SELECTED YEARS

TABLE 6.10

$'000

	1975	1980	1981	1982	1983	1984	1985	1985 (Jan-Oct)	1986 (Jan-Oct)
SECTION									
0 Food and Live Animals	190,843	102,221	101,535	78,841	65,360	82,717	70,319	...	...
1 Beverages and Tobacco	11,407	15,248	14,886	16,589	13,001	15,063	18,113	...	...
2 Crude Materials, inedible except fuels	6,267	4,432	2,747	7,553	8,715	12,063	16,213	...	...
3 Mineral Fuels, Lubricants Related Material	3,187,009	8,653,928	7,615,437	6,006,768	4,313,507	3,852,526	3,689,443	...	...
4 Animal and Vegetable Oils and Fats	25	31	26	30	37	43	36	...	...
5 Chemicals	98,500	212,737	232,446	337,657	424,858	543,995	620,913	...	...
6 Manufactured Goods	1,274	5,898	27,427	69,184	98,572	119,266	63,885	...	...
7 Machinery and Transport Equipment	418	1,279	2,192	2,224	143,876	68,557	147,740	...	...
8 Miscellaneous Manufactured Articles	7,868	12,284	13,433	10,455	17,871	20,692	13,023	...	...
9 Miscellaneous Transactions and Commodities	633	1,573	1,452	966	7,502	9,053	8,671	...	...
TOTAL	3,504,244	9,009,631	8,011,581	6,530,267	5,093,299	4,723,975	4,648,356	3,930,600	3,864,200

Source: "Overseas Trade 1985" op cit

EXTRA-REGIONAL EXPORTS OF SELECTED FOOD PRODUCTS, 1985

TABLE 6.11

	$'000	% EXTRA-REGIONAL FOOD EXPORTS	% TOTAL EXTRA-REGIONAL EXPORTS
Sugar - Refined and Unrefined	51,068	72.6	1.0
Molasses - Raw	1,492	2.1	-
Cocoa, Beans	7,209	10.3	0.1
Coffee - Raw	4,044	5.8	0.1
Rum (SITC 112 - 491/492)	10,447	-	0.2
Bitters (SITC 112 - 497/498)	3,443	-	0.1

Source: "Overseas Trade 1985" op cit.

Note: Rum and Bitters are not included in SITC Section 0 - Food and Live Animals, but have been added for information.

INTRA-REGIONAL FOOD IMPORTS AS A PERCENTAGE OF TOTAL FOOD IMPORTS: SELECTED YEARS

TABLE 6.12

YEAR	TOTAL VALUE	INTRA-REGIONAL VALUE	INTRA-REGIONAL AS % OF TOTAL
	$'000	$'000	
1975	284,884	36,466	12.8
1980	707,208	69,320	9.8
1981	835,099	83,329	10.0
1982	904,736	93,072	10.3
1983	923,764	113,775	12.3
1984	894,073	104,412	11.7
1985	764,146	115,741	15.1

Source: Compiled from Tables 6.3 and 6.8.

P A R T C

THE AGRICULTURAL SECTOR

1986 TO 2000

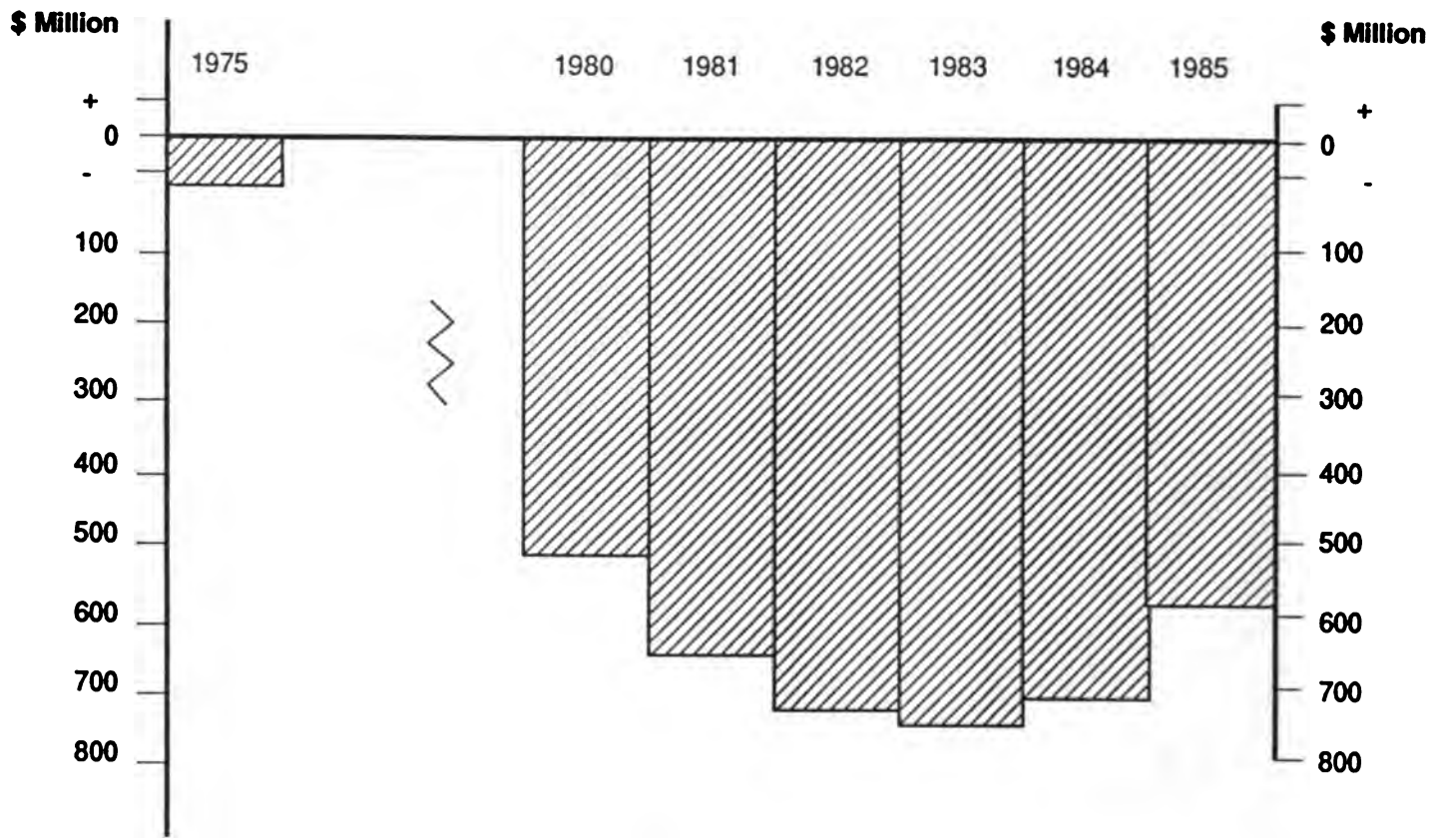
CHAPTER SEVEN

DEVELOPMENT IN THE MEDIUM TERM

- THE POTENTIAL CONTRIBUTION OF THE AGRICULTURAL SECTOR

- ISSUES IN THE AGRICULTURAL SECTOR

CHART 6 : 1 Balance on Extra-Regional Food Trade: Selected Years

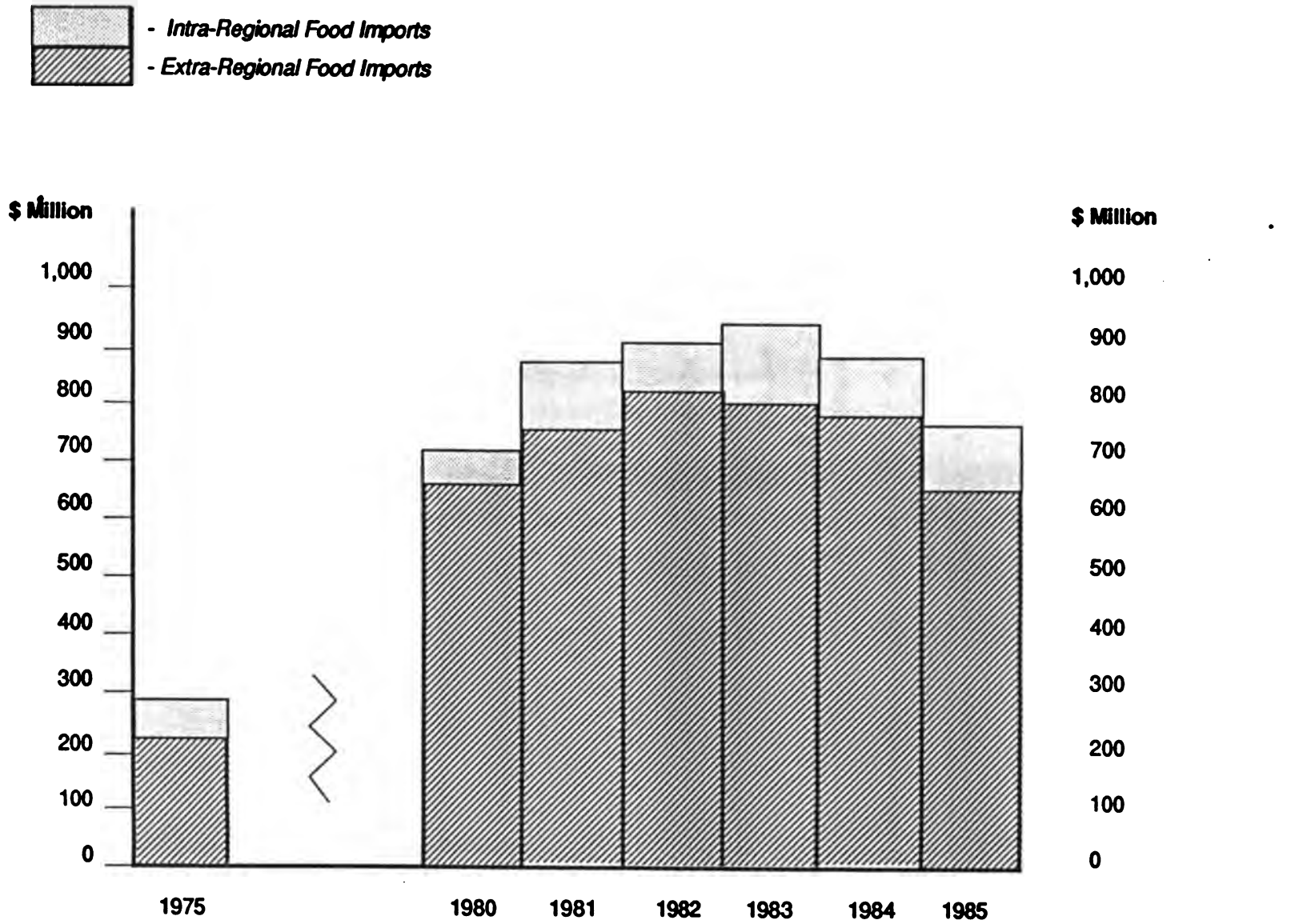


Source: Compiled from data in Tables 6 : 8 and 6 : 10

CHART 6 : 2

Intra and Extra-Regional Trade Intensity : Malaysia Year

CHART 6 : 2 Intra and Extra-Regional Food Imports : Selected Years



Source: Compiled from data in Tables 6 : 1 and 6 : 8

Trinidad and Tobago emerged from the period 1983 to 1986 with a somewhat reduced but still large deficit on extra-regional food trade which amounted to more than $550 million in 1985. The balance on intra-regional food trade, although of different significance, had increased over the period to reach minus $98 million.

The current high level of interest in the deficit on food trade, is largely the result of the impact of the movement of the balance of visible trade which moved from a surplus of $2.2 billion in 1980 to a deficit of $1.5 billion in 1982. Urgent action resulted in the reduction of the deficit to minus $0.5 billion in 1983 and positive balances were achieved in 1984 and 1985. The trade deficit and the measures employed to re-achieve a positive balance (largely severe restrictions on imports) served to emphasize the extreme dependence of the economy of Trinidad and Tobago on a single export, oil.

There has therefore been a renewed effort recently to revitalize and expand the non-oil sectors of the economy with the aim of increasing the value of exports and reducing the value of imports. It is in this context that the potential role of the agricultural sector must be examined.

POTENTIAL CONTRIBUTION OF THE AGRICULTURAL SECTOR

(a) Background

Extra-regional food imports of Trinidad and Tobago consist overwhelmingly of livestock products and animal feeding stuff, some vegetables (fresh, dry) and small amounts of temperate fruits. The value of extra-regional food imports rose rapidly to reach $812 million in 1982. Efforts to restrict imports were successful (less so in food than in other areas of imports) and the value of extra-regional food imports fell to $648 million in 1985. Intra-regional imports of food, $115 million or 15 per cent of the total food import bill of Trinidad and Tobago, will be excluded from the following analysis except in the context of regional cooperation in production and

marketing which will lead to increased intra-regional trade (imports as well as exports).

The value of extra-regional food exports, in contrast to extra-regional food imports, has fallen in every year since 1980 to reach $70 million in 1985 (69 per cent of the value in 1980). The decline has been due primarily to falling production and export in the traditional export crops. An increase in the value of "non-traditional" food exports has so far not been able to compensate adequately.

Trinidad and Tobago, with high levels of extra-regional food imports and low and falling levels of extra-regional food exports had a deficit on extra-regional food trade of minus $744 million in 1983 and minus $578 million in 1985.

The food deficit[1] in 1983 ($744 million) was larger than the net total deficit in that year (minus $550 million). The food deficit in 1985 (minus $578 million) was equal to 15 per cent of the value of exports of petroleum and petroleum products, including fertilizer. This means that 15 per cent of the value of petroleum exports, which ought to be invested in capital works and other investment was used to cover the food deficit in an economy which until recently was based largely on agriculture. This situation is clearly undesirable. It must be appreciated however that severe restriction of food imports by itself, must necessarily be a temporary measure because of the effect this will have on the nutritional levels of the population.

(b) A Programme of Agricultural development

The Agricultural Sector of Trinidad and Tobago must therefore seek to increase foreign exchange earnings/savings. This task is shared with other sectors. The agricultural sector is however particularly well suited to the task because of a lower import content of production and high value-added.

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1. The value of extra-regional exports of food minus extra-regional imports.

Increased levels of employment, output and farm incomes are expected to flow from efforts within the sector aimed at foreign exchange earnings/ savings.

A programme of agricultural development, aimed primarily at earning/saving foreign exchange would necessarily contain three components:-

- Production for domestic consumption;
- Export oriented production;
- Regional joint-venture projects.

(i) Production for Domestic Consumption

Production for domestic consumption[1] grew from a value of $313 million in 1982 (1.6 per cent of GDP) to $519 million in 1986 (3.0 per cent of GDP). This sub-sector, which regularly achieved real growth over the period 1982 to 1986 naturally attracts attention in any programme of agricultural development.

The expansion of this sub-sector must aim specifically to increase production for direct consumption, the food processing sub-sector and for the export of non-traditional exports to intra and extra-regional markets.

Domestic production of fruit, vegetables, roots and starches, is currently undertaken by a large number of small farmers with some participation by medium-sized and large farmers. A major constraint to greatly expanded production in this sub-sector is that more land must be made available to the small farmers involved and medium-sized and large farmers must be encouraged to increase their production of these crops. Trinidad and Tobago does not have large areas of

1. Fruit and vegetables, roots/starches, citrus, copra, livestock, fish.

fertile soil which are not currently under cultivation. At present 81 per cent of the available agricultural land is devoted to sugar cane and tree crops; expansion of the area devoted to domestic crops will therefore require diversion from export crops and, in the case of the tree crops and marginal lands, capital expenditure on land clearing and the installation of infrastructure.

Domestic agricultural production must compete directly with producers from within and outside the region for the fresh food market and the supply of inputs to the food processing industry. The aspect of competition may be viewed at two levels, productivity and marketing. Improvements in productivity will be achieved by the use of new varieties and farming systems and the adaptation of new technologies such as hydroponics. The marketing system will need to be improved by timely market information systems and an efficient distribution system that includes proper packing, transportation and storage which will reduce post-harvest losses and increase the quality of produce presented for sale. An integral part of this improved marketing system must be promotion and market research whereby the preferences of the consumer are transmitted to producers and the consumer in turn, through promotiona activities, is encouraged to increase his per capita consumption.

The rapid increase in per capita incomes since 1974 has led, as was to be expected, to increased consumption of higher-valued foods such as meat. In 1975/76, the average monthly household expenditure on meat was $19.18. In 1981/82 this figure had increased to $60.41. Domestic production of meat has failed to keep pace with the rapid increase in demand and livestock products[1] comprise a large part of the extra-regional food imports of Trinidad and Tobago. Aspects of livestock production, including animal feeding stuff, will be addressed in Section III of this Chapter. Fish production will also be included at that time.

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1. Meat, milk, fish.

A further aspect of the rapid increase in per capita incomes in Trinidad and Tobago is an increase in the demand for processed foods. There has been considerable investment in food processing plant and equipment in recent years in an attempt to satisfy the growing demand. It is still generally true, however, that except for small and medium-sized producers, the food processing industry is still largely based on imported raw material. The resolution of this situation will require the production of varieties suitable for processing and deliberate production for the food processing industry. This will require the development of suitable varieties and production systems, and the introduction of contract farming arrangements that are attractive to farmers and offer both parties a fair measure of protection.

The third market for domestic production is export to intra- and extra-regional markets. An effective market information systems in particularly necessary in this area. The market for "exotic" fruit, cut flowers and foliage, etc is very sophisticated and requires marketing skills of the highest order. The market is also very lucrative and attracts many suppliers, many of whom have highly developed marketing systems already in place.

In such an environment, it is important that the export market be regarded as an extension of the domestic market - systems of packing, storage, transport, display and promotion must be developed and tested on the domestic market. The experience gained locally will indicate strengths and weaknesses which will guide the decision-making process in selecting segments of the export market that should be exploited.

(ii) Traditional Export Crops

Export of traditional export crops[1] amounted to more than $80 million in 1985. This is a considerable earning of foreign exchange and serves to underline the continuing importance of this sub-sector.

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1. Includes rum and bitters.

Much has been written on ways to cure the malady of the sugar industry; the recommendations may be condensed into a four-pronged approach:

- Seek to satisfy lucrative guaranteed markets and the requirements of the domestic food processing industry;

- remove marginal lands from sugar production and engage in a programme of crop diversification;

- shift production emphasis to other, high-valued products of the sugar cane;

- engage in a programme of mechanization to the extent that this will improve productivity and incomes.

Cocoa and coffee production seem to have one major problem not generally shared by other sub-sectors - disease. Recent efforts at disease control and a general programme of rehabilitation have proven successful. The two commodities would still however be prone to violent swings in the export price.

(iii) Regional Joint Ventures

Imports of meat preparations, milk, fish, maize, wheat and animal feeding stuff had a value of $353 million and accounted for more than half of the extra-regional imports of food by Trinidad and Tobago in 1985. The total value of these imports by the Caribbean Community in 1983 was EC$1.1 billion (TT$1.4 billion).

Trinidad and Tobago and the other island states of the region do not have the capacity to produce adequate amounts of livestock products and the necessary feeding stuff. Any serious attempt to tackle this issue will require a joint effort by the Member States acting in concert.

In the specific case of the transformation of the agricultural sector of Trinidad and Tobago two regional joint ventures suggest themselves:-

- the production of livestock feeding stuff and livestock products, including hatching eggs;

- the identification and scientific exploitation of marine resources of the exclusive economic zones of Caribbean Community Member States.

Both projects would require a combination of manpower (including management), natural resources (land or off-shore fishing banks) and the necessary capital. The details of the extent of capital involvement by Trinidad and Tobago, the location and nature of production facilities, etc would naturally be decided by technical considerations and bi-lateral (or Regional) negotiations between the Member States involved.

A brief examination of the prospects of oil prices in the medium-term suggests that it is in the interest of both producer and consumer countries that the price does not fall much below US$18 per barrel. Indeed, recent events suggest that the price may stabilize just above that figure.

The significance of this prediction is that Trinidad and Tobago will continue to enjoy a reduced but still considerable income from the petroleum industry. If this scenario is combined with a programme of increased agricultural production, it then becomes apparent that -

- large sums of capital will be required for any proposed drastic increase in food production;

- the sums will be available, from the foreign exchange earnings/savings of the agricultural sector and from the continued earnings of the petroleum sector.

Trinidad and Tobago then, has the potential to form a large part of the capital required for these two regional joint venture projects and also consistutes a large part of the regional market for livestock products. The concept is not new; the fate of the regional corn and soya project is history. It is necessary to learn from the lessons of that effort and to display more commitment to the new ventures.

Trinidad and Tobago will thus share with other participants in the generation of employment, the value added and the concommitant saving of foreign exchange. It has been suggested earlier that technical considerations will heavily influence the location of grain production, feed mills, animal production facilities and meat packing plants. There are benefits to be obtained by all participants.

The project to identify and exploit the marine resources of the exclusive economic zone of Caribbean Community Member States would follow a similar pattern, with investment by Trinidad and Tobago, other interested Member States of the Community and foreign investors. Participating Member States would then negotiate for the allocation of activities such as ship building/repair and fish processing plants.

The outline above has focussed almost entirely on the production aspects of the two projects. It must be obvious however that any large increase in the regional production of these products must be accompanied by the creation of a single regional market through the creation of a truly common external tariff and putting in place a protocol to allow free intra-regional trade in food products of regional origin. It is particularly important that the trade in meat and meat products is not hampered by non-tariff barriers such as phyto-sanitary regulations. Work is in progress in the region on the setting up of New Marketing Arrangements for agricultural products and the modification of the Rules of Origin.

The final issue in this brief outline is the repatriation of the profits of these regional joint ventures. Trinidad and Tobago may wish to consider accepting at least a part of such profits by the barter-like acceptance of the products of the enterprises created. It must be remembered that at present 15 per cent of the proceeds of oil exports is used to cover the extra-regional food deficit.

(c) Support Infrastructure/Mechanisms

(i) Land Reform

The pattern of land distribution in Trinidad and Tobago displays less "skewdness" than is often the case in many Caribbean states. There is a need nevertheless to ensure that vibrant farmers such as the domestic food-crop producers have adequate supplies of suitable land made available to them. The Government of Trinidad and Tobago is in a strong position to influence this allocation as it is a major land owner and directly controls Caroni Ltd.

(ii) Marketing

There will be a need for improved market information and distribution systems geared specifically to fresh produce. The system should aim to reduce post harvest losses, improve the quality of produce offered for sale, increase per capita consumption of fresh produce in Trinidad and Tobago and ensure that a high percentage of the final price goes to the farmer. The system should also inform the farmer of the requirements of the consumer.

(iii) Research and Development

The programme of research and development will need to produce new varieties of food crops for direct domestic consumption,

export and the food processing industry, and new forage crops and animal feed-mix systems that utilize high yielding crops that are natural to the region. Research in farming systems will also be necessary to meet the new requirements of new varieties in a framework of a commercial agriculture. The extension service must form the link between the research and marketing functions listed above.

(iv) Credit

Credit will form the cornerstone of any dynamic programme of agricultural development, moreso if the programme seeks to achieve high productivity and incomes. The credit programme need not seek to provide low-interest credit which tends to lead to difficulties in repayment. Instead the programme may offer farm credit at commercial rates of interest and actively assist farmers in the identification and implementation of viable projects. Improved on-farm financial management systems supervised by the extension or credit agency, would be an integral part of this programme. It is important also that the commercial banks be involved in the harnessing of rural savings and in the execution of loans.

ISSUES IN THE AGRICULTURAL SECTOR

(i) Labour

Adequate supplies of labour are at present available to most sub-sectors. It seems that the recent down-turn in oil prices and reduced employment opportunities elsewhere in the ecoomy are largely responsible for the forced shift by displaced labour to agriculture. It stands to reason therefore that, "ceteris paribus" when the economy recovers the labour will again leave the sector.

The deciding factors will be incomes and conditions of work. Agriculture will need to be competitive in order to attract skilled and motivated labour and yet, as was seen in the sugar industry, high salaries may not be enough. Conditions of work and the self-image of an agricultural worker seem to be crucial factors. The sector should seek to provide high incomes which will only be possible through increased productivity (mechanization, improved varieties and farming systems) and the production of high value produce. Simultaneously, the society should seek to upgrade the public conception of agricultural work.

(ii) Subsidies/Price Support

Farmers need to operate within a fairly stable price framework. To this end, commendable efforts have been made to stabilize prices by various agencies operating within the sector. Subsidy programmes have been very successful as with milk production. The problem has been a lack of responsiveness on the part of the administrators of the system. Milk production is again a case in point where delay in the payment of subsidies has forced farmers into severe cash flow difficulties. Subsidies should not be announced until the relevant agency has secured adequate funding. Failed programmes reduce the chances that farmers will participate in future programmes.

CONCLUSIONS

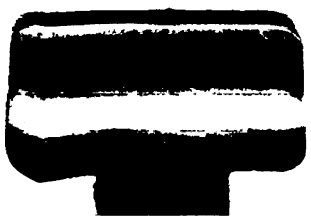
Trinidad and Tobago, unlike many other countries of the Third World, has the chance to effect significant development of the agricultural sector with three positive factors:-

- A reasonable supply of capital and foreign exchange is still available.
- The farmers are skilled and enjoy a high standard of education.

- There is a large and sophisticated domestic and regional market for food products.

In this context therefore a programme should be implemented which seeks to achieve high productivity and high incomes within the sector. Such a programme will require the efficient use of the considerable capital already invested in the sector by carefully planned, selective investment in critical areas. Constraints should be identified in each sub-sector and investments made which will clear that bottleneck and allow more optimum use of upstream and downstream investments.

It is essential that this development programme be administered by an agency which is flexible and has management information systems that will allow a wholistic approach to development. The entire programme should be seen as one entity with various aspects (credit, marketing, etc) expanded, contracted or modified to suit the situation as development proceeds.



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