

THE ECONOMIC DEVELOPMENT
OF ANTIGUA--
PROBLEMS AND PROSPECTS

CENTRE FOR NEWFOUNDLAND STUDIES

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THE ECONOMIC DEVELOPMENT
OF ANTIGUA--
PROBLEMS AND PROSPECTS

by

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A THESIS

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the degree of

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ABSTRACT

During the past twenty-five years, problems of economic development have gained prominence--not only among economists, but also among politicians and statesmen all over the world. The rapid growth of interest in this branch of economics is reflected in the numerous books and articles that have been written on the subject. This thesis is another study of economic development, but it differs from most of the other works on the subject in that it deals with a very special type of economy, namely, the very small economy.

The size of a country helps to shape the pattern of economic activity in that country. This study purports to point out some of the problems which face a small economy--Antigua, and seeks to suggest ways and means of dealing with these particular problems.

A comparison is made between Antigua and some advanced countries for the purpose of showing the stage of development of the island. The problems of population and unemployment are studied in some detail, and the evolution and development, as well as the structure of education are

studied. An attempt is made to evaluate the impact of education on the economy. Improvements in public health and housing are also discussed. The role of agriculture in the economy is examined and the system of agriculture is investigated. Foreign trade is also considered. Some consideration is given to industries which might successfully be introduced. Sources of finance are examined and some suggestions are made for the increase of funds for development purposes. Finally, tourism is studied in some detail and some suggestions are made for the development of this industry.

Although the study is concerned with a particular economy, it is hoped that some other small economies with similar problems will benefit from it.

This thesis has been examined and approved by:

and

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CHAPTER I

INTRODUCTION

Economic development, defined as the creation of conditions that allow the production of more goods and services, has always been a subject of interest among economists. Adam Smith was a great development economist and his growth model incorporating the 'division of labour' is well known. David Ricardo also gave some considerations to the problem of economic development, pointing out how diminishing returns to land and capital might bring the growth process to a halt. But no direct attempts were made either by governments or by private individuals to mitigate the poverty-stricken conditions under which two-thirds of the people of the world eke out a mere existence. The classical economists were speculating about the long-run growth of the economy in terms of their own laissez-faire framework.

The theory of economic development, as we now know it, is of fairly recent origin--a product of the post-World War II era. Here, the emphasis is not only on the growth of Gross National Product (GNP) but also, and equally im-

portant, on institutional changes. Today, the plight of the inhabitants of the poor countries has occupied a pre-dominant position among the major social and political issues of the world. This great concern over the poor which has developed over the past twenty-five years is viewed by John Fei and Gustav Ranis as an acceptance of the responsibility to do something to improve living conditions in poor countries. They wrote:

With the full realization of the magnitude of existing international income differential--and the inability to blame colonialism for it any longer--economic development has become a matter of the highest priority. Although the relative poverty of such countries is not a new phenomenon, the realization that something can and should be done about it represents a powerful new factor on the post-war scene.¹

Various factors are responsible for this change in attitude towards economic development. The achievement of political independence by some of the poorer countries is one of these factors. Freed from colonial rule, the new nations are anxious to catch up, at practically any cost, with the more advanced countries that they claim had used their greater political and economic power to

¹John C. H. Fei and Gustav Ranis, Development of the Labour Surplus Economy (Illinois: Richard D. Irwin, Inc., 1964), p. 1.

3.

enrich themselves at the expense of the colonies. A second factor which has influenced the change in attitude is a keener sense of social responsibility. There is now a growing feeling among citizens in the advanced countries that they have a moral obligation to help their fellowmen in the poorer parts of the world. Thirdly, after the Second World War, the two major power blocks, the United States of America and the Soviet Union, emerged on the side of the victors. Each side has been trying to expand its ideology by preaching to the rest of the world that one system is superior to the other. The Soviet Union has been preaching that communism is the salvation of the world, while the United States and other Western democracies have been proclaiming that free enterprise is by far the better system, stressing particularly the freedom of the individual as being of paramount importance. In their endeavour to spread their different ideologies, the United States and the Soviet Union have decided to help the underdeveloped countries towards a better way of life. The development in transport and the mass media of communication have been particularly favourable to the objectives of these two powers. Their messages can reach the underdeveloped countries with comparative ease. In a relatively short space of time, anyone can travel from the United States or from the Soviet

Union to almost any underdeveloped country of the world.

The terms "developed", "underdeveloped," and "developing" have been used by various writers to mean different things. These terms will appear quite frequently throughout this study; therefore it seems necessary that I make clear exactly what I mean by these terms. Underdeveloped, developing and less developed will be used interchangeably to refer to countries where productivity and per capita incomes are low relatively to those in the advanced countries. Developed and advanced will be used interchangeably to refer to those countries where productivity and per capita incomes are high relatively to those in the economically poorer countries. Table 1-1 contains a list of developed and underdeveloped countries and their corresponding levels of per capita income.

Professor E. Hagen denies the validity of any such concept as a developed country. According to him:

There are less developed countries and more developed countries. But there are no developed countries. For there is no identifiable end point to the process of development.²

This same view is held by Hugh L. Keenleyside. He considers every country in the world to be underdeveloped, because

²Everett E. Hagen, The Economics of Development (Illinois: Richard D. Irwin Inc., 1968), p. 5.

TABLE 1-1
LEVELS OF PER CAPITA INCOME
OF SELECTED COUNTRIES IN 1966

<u>Developed Countries</u>		<u>Underdeveloped Countries</u>	
Country	Per Capita Income \$(U.S)	Country	Per Capita Income \$(U.S)
United States	3,520	Antigua	300
Canada	2,240	India	90
Australia	1,840	Ceylon	150
France	1,730	Thiland	130
United Kingdom	1,620	Sudan	100
Sweden	2,270	Brazil	240
New Zealand	1,930	Chile	510
Italy	1,030	Jamaica	460
Denmark	1,830	Trinidad	630
Switzerland	2,250	Nigeria	80
Israel	1,160	Turkey	280
Norway	1,710	Syria	180
Luxembourg	1,920	Hong Kong	560
Germany (Eastern)	1,220	Ghana	230

Source: Finance and Development, Vol. 6, No. 1, March 1969.

"there is no government or people that has reached the ideal state in which full use is being made of all the beneficial possibilities that science and technology have now provided for the material benefit of human society."³ Although I agree with the view point of Professor Hagen and Hugh Keenleyside, I choose to use the term because it seems to me that provided it is given a precise definition, it becomes an operational or functional concept. There are many difficulties and controversies surrounding the question of the measurement of development. The limitations of the use of the concept of per capita income as an index of material well-being are well-known. Other measures have been suggested but they all seem to suffer from greater drawbacks than does the concept of per capita income. Therefore, for want of a better measure, I shall use per capita income as the criterion for development. However, social factors and institutional changes will not be neglected.

Within the past twenty years, a voluminous amount of work has been done on the problems of economic development. Numerous books and articles have been published on

³Hugh L. Keenleyside, "Obstacles and Means in International Development," Dynamics of Development, ed. Gove Hambidge (New York: Frederick A. Praeger, Inc., 1964), p. 8.

This topic. However, it is my contention that this work so far, has not given sufficient attention to the size of the country. Even those authors who have written on the development of small economies have confined their studies to economies of a certain minimum size. The economies which fail to meet this minimum size are simply neglected.⁴ The result is that much of what has been written is irrelevant to the conditions in small, very small countries. Moreover, certain factors, including well over three hundred years of association with England, the proximity of Antigua to the North American Continent, and its intermediate stage of development, have given it features which are not characteristic of other underdeveloped countries. I shall attempt to outline some of these unique features and to show their implications for the economic development of Antigua.

⁴For example, William G. Demas in his The Economics of Development in Small Countries with Special Reference To the Caribbean (Montreal: McGill University Press, 1965), restricted his study to the larger islands of Jamaica, Trinidad and Tobago, British Guiana, and Barbados. The Leeward Islands were just grouped together for an occasional mention. The Economy of the West Indies, ed. G.E. Cumper (Jamaica: University College of the West Indies, 1960) and The Economic Consequences of the Size of Nations, ed. E.A. G. Robinson (London: Macmillan, 1960) follow the same general line of approach.

As the title suggests, this study is concerned chiefly with problems of development in Antigua, and therefore, no attempt will be made to generalize it so as to include other underdeveloped countries, no matter how similar may be their problems. Thus references to other underdeveloped countries will be either for the sake of comparison, for expository convenience, or just incidental. The following chapter gives background information about the economy of Antigua so as to provide a framework within which the particular problems of development which now confront the island can be studied. A general economic picture is presented in the final section of the chapter by contrasting Antigua with the developed countries.

CHAPTER II

A GENERAL ECONOMIC FRAMEWORK

1. Geographical and Historical Survey

A. Physical Features

Antigua is a small island of 108 sq. miles in the Caribbean Sea. It is one of the British West Indian islands and belongs to the group known as the Leeward Islands. The other islands in the group are Barbuda, which is a dependency of Antigua, St. Kitts, Nevis, Anguilla, Montserrat, and the British Virgin Islands. All these islands are very small, tiny in fact, as the following table indicates.

TABLE 2-1

LEEWARD ISLANDS AREA, POPULATION AND
POPULATION DENSITY. 1960

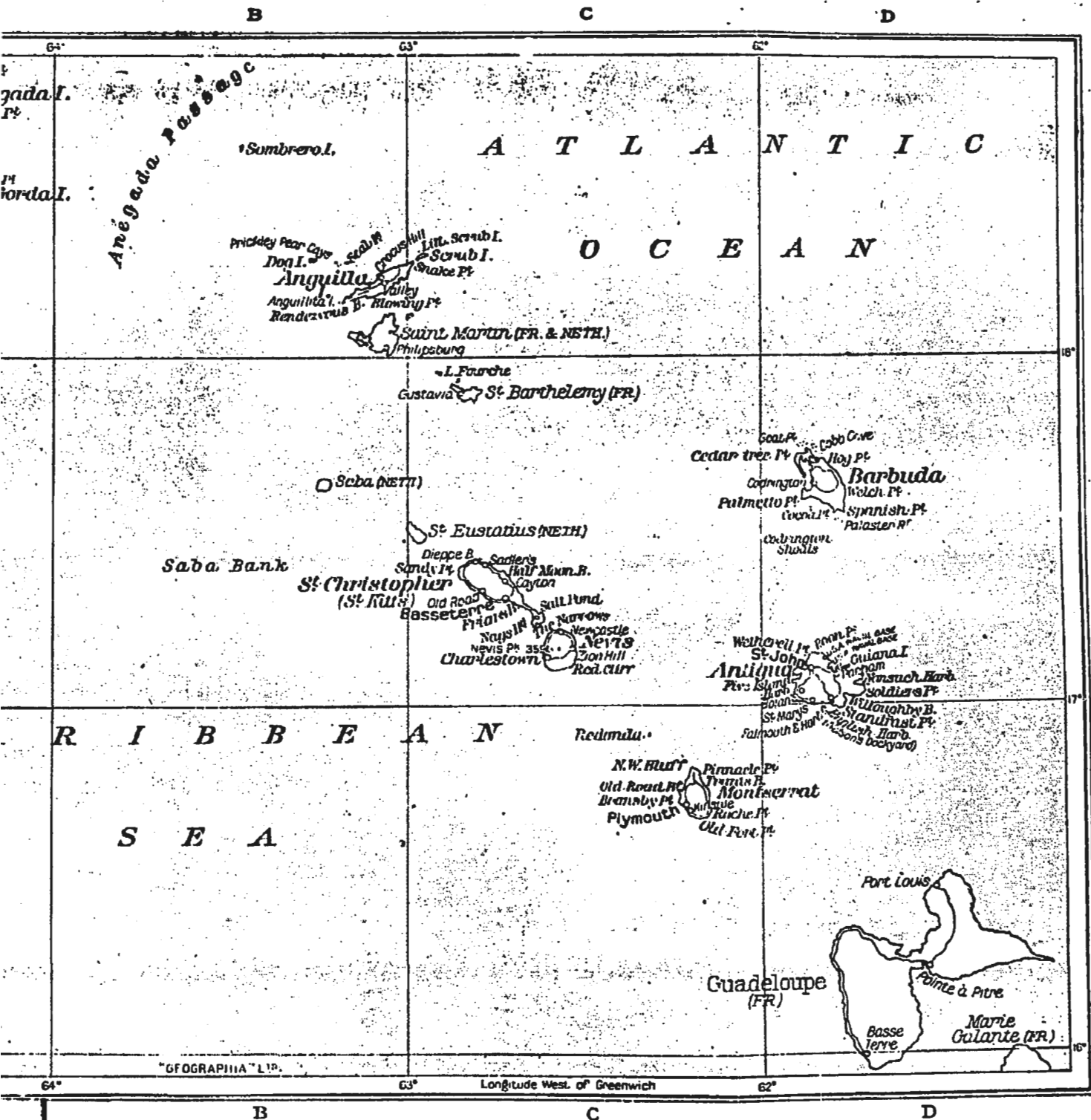
Island	Area (Sq. Mile)	Popula- tion	Density per Sq. Mile
Antigua	108	54,060	501
Barbuda	62	1,162	19
St. Kitts	68	38,113	560
Nevis	56	12,770	228
Anguilla	35	5,810	166
Montserrat	33	12,167	368
British Virgin Islands	67	7,921	118
Total (Leeward Is.)	429	132,003	308

Calculated from: West Indies Population Census, 1960.

C



LEEWARD ISLANDS



LEEWARD ISLANDS

WINDWARD IS.

All these islands, with the exception of Anguilla, which is about 55 miles north of St. Kitts, form a fairly compact group. Antigua is relatively flat, the highest point, Boggy Peak, reaching a height of about 1,330 ft. above sea level. There is a variety of soils scattered all over the island. In the north and east, the soil is highly calcareous; in the south-west, it is of a fertile volcanic nature; and in the central portion, it is composed of sedimentary rocks and heavy clay deposits.¹

Lying between 61 degrees 40 minutes and 60 degrees 54 minutes West Longitude and 17 degrees and 17 degrees 10 minutes North Latitude, the island has a tropical climate. Because Antigua is a small island, the moderating influence of the sea is felt throughout all parts of the island. Whenever I am questioned about the seasons, I always reply that only two seasons are experienced in the island--a wet season and a dry season. It is difficult to group the months of the year exactly into categories of wet months and dry months, because there is no particularly regular pattern of rainfall distribution among the months.

¹See R. R. Platt et al., The European Possessions in the Caribbean Area (New York: The American Geographical Society, 1941), p. 18.

But quite generally speaking, the wet season can be said to extend from June or July to September, while the dry season lasts from about October to May. The temperature ranges from about 82° F in the warmest month (August) to about 76.9° F in the coldest month (January). The mean annual rainfall is about 43 inches and the island experiences frequent and severe droughts. Rainfall figures for the first eight months of the years 1965 to 1969 are given in Table 2-2.

The climate of Antigua is drier than that of most of the other West Indian islands, and is delightful from the end of November to the beginning of May, when the North-east trade winds begin to fail.

There are no high hills and forest growth, and this distinguishes Antigua from the rest of the Leeward group. There are no rivers, and only a few springs are to be found in the eastern and southern parts of the island. There is a tradition that Columbus named the island Antigua because he had difficulty in finding water there. The island possesses some excellent natural harbours as Bryan Edwards has pointed out:

No island in this part of the West Indies can boast of so many excellent harbours. Of these, the principal are English harbour and St. John's, both well fortified.²

²Bryan Edwards, The History of the British West Indies, Vol. 1, (New York: Ams Press, Inc., 1966), p. 486.

TABLE 2-2

DISTRIBUTION OF RAINFALL BETWEEN THE
FIRST EIGHT MONTHS OF THE YEARS 1965-69

(Inches)					
Month	1965	1966	1967	1968	1969
January	3.07	0.83	1.34	0.73	2.08
February	1.24	0.71	1.03	0.23	1.17
March	1.41	1.57	5.71	0.55	0.82
April	1.91	1.70	0.89	2.32	3.21
May	3.22	2.29	1.20	3.49	14.08
June	2.42	0.91	2.02	2.29	2.62
July	3.56	4.49	3.78	0.98	5.08
August	3.09	3.47	0.98	1.92	3.28
Total (8 months)	19.93	15.97	16.95	12.51	32.34

Source: The Antigua Official Gazette (Antigua: Government Printery, 1969).

With the exception of salt which can be obtained in small, but appreciable quantities, there is a lack of minerals in the island. Traces of sulphur, copper, graphite and other important minerals are non-existent. However, Antigua is endowed with numerous lovely sandy beaches, and these form a substantial part of the assets

of the island.

The significance of natural resources in economic development is still a highly controversial matter among writers on the subject. Some believe that the natural resources existing in a country substantially influence its economic development,³ while others believe that natural resources do not play a very important role in economic development.⁴ Whatever might be said in general terms, for or against the importance of natural resources in economic development, it is positive that, in the case of Antigua, the lack of adequate precipitation is a severe constraint on the rate of development of the island. Moreover, it is quite likely that if Antigua had great deposits of oil, copper and other useful mineral and power resources to supplement the agricultural output, it could have reached a higher stage of development. The great oil fields in Trinidad doubtlessly play an important part in

³See, for example, Robert E. Baldwin, Economic Development and Growth (New York: John Wiley and Sons, Inc., 1966), p. 18.

⁴See B. W. Hodder, Economic Development in the Tropics (London: Methuen and Co., Ltd., 1968), p. 9 and Peter T. Bauer and Basil S. Yamey, The Economics of Underdeveloped Countries (Chicago: University of Chicago Press, 1957), pp. 46-47.

the development of that island. Of all the British West Indian islands, Trinidad has the highest per capita income. The exploitation of bauxite for the making of aluminum in Jamaica is likely to have a considerable impact on development in that island, and its per capita income will no doubt increase significantly in the next few years.

One of the serious problems which face Antigua's economic development is the small size of the island. This is a problem which is outside the control of policy makers because more land can be obtained only at a prohibitive cost. The size of an economy can exert a considerable constraint on its development. In a small economy like Antigua, diseconomies of scale are present in many spheres of economic activity. The number of industries that can operate in the island is limited by the small size of the market, and diversification is extremely difficult. Thus the island is forced to be a specialist economy. Again, because of the smallness of the island, the quantities of goods imported are small, and as small quantities tend to have a higher unit cost, prices are pushed upward by the high cost of importing.⁵

⁵For an excellent discussion on growth problems of small economies, see C. O'Loughlin, Economic and Political Change in the Leeward and Windward Islands (New Haven: Yale University Press, 1968), pp. 1-13.

B. The Historical Setting

Antigua was discovered in 1493 by Christopher Columbus on his second voyage to the West Indies. The Spaniards attempted to settle on the island in 1520 but they found it too dry, so settlement was postponed until 1632 when Sir Thomas Warner colonized the island. At that time, the chief crop was tobacco, but in the 1640's, sugar-cane was introduced into the island, and as it was found to be more profitable than tobacco, it fast became the island's chief product. The operation of sugar estates became extremely profitable, and the wars between the English and French were much concerned with the possession of the sugar islands. Antigua was the only British island to possess a good harbour in the area, and English Harbour was the dockyard for the British West Indies throughout that period.

In 1871, the Leeward Islands were federated. This federation lasted until 1956 at which time, the ministerial system was introduced. Two severe hurricanes struck Antigua on August 21 and 31, 1950. These destroyed virtually all the thatched houses of the natives. The government, soon afterwards, started the construction of a number of houses on a 'self-help' basis, so that the era of thatched roof houses came to an end. This is not to say that until 1950,

all the houses in the island were thatched houses. Robert Hill, writing as early as 1898, gave this brief description of the island's capital:

St. John is a pleasant place, consisting of large and commodious frame houses situated upon clean, well-graded, and macadamized streets. There are many public buildings, handsome gardens and lawns, the public institutions all being models of neatness and order. There is an imposing English cathedral. A good public library, freely patronized by the inhabitants is found upon one of the central streets.⁶

The year 1958 saw the inauguration of the West Indies Federation. Many had hoped that this vital step would open the door to the development of the islands. No attempt will be made here to discuss the reasons for the failure of the federation. Suffice it to say that in 1962, after the secession of Jamaica, and later, Trinidad and Tobago, the federation was dissolved. Since then, there have been talks concerning the possibility of a federation of the smaller islands, but nothing has resulted. Antigua achieved its independence in February, 1967, so although the island has had a long history, the state of Antigua is really only about three years old.

⁶Robert T. Hill, Cuba and Porto Rico with the other Islands of the West Indies (New York: The Century Co., 1898), p. 323.

There is a strong feeling among Antiguanans that the colonial system has done more harm than good to the island's development. They contend that England, by virtue of its greater economic and political power, had suppressed them while making itself rich. This is a feeling that has long been with Antiguanans, and as a result, they have no love for Britain.⁷

But in spite of all this, a good word may be said on behalf of colonialism. It did not do all harm. For one thing, the colonials introduced a good system of government and an efficient system of administration into the island. Now that Antigua is free from colonial rule, the people are willing and anxious to play their part in the development process. The will to participate in the development process is intensified by the increasing awareness of standards of living in other countries. The increase in awareness is the result of many factors including the effects of television and movies. The conditions under which people in the developed countries live are portrayed on the screen, and this arouses a desire to attain similar standards. The presence of an American base on the island and the development of the tourist industry also contri-

⁷See Harry A. Franck, Roaming Through the West Indies (New York: Grossett and Dunlap, 1920), pp. 345-46.

bute to the growing anxiety to enjoy a higher level of material well-being.

2. A Contrast Between Antigua and the Developed Countries

A. The Income Differential

Per capita income estimates reveal most impressively the vast difference in economic prosperity between the advanced countries and Antigua. This disparity is regarded by A. J. Coale as "an increasing irritant to the pride and ambition of the leaders in the underdeveloped areas and to the conscience of the modernized countries."⁸ The per capita income of Antigua, as shown in Table 1-1, was \$300 (U.S.) in 1966, as against \$3,520 for the United States, and \$2,240 for Canada. The gap between incomes in Antigua and the developed countries may not be quite as wide as the statistics reveal, because most income estimates under-value the goods and services produced in the rural sector of developing economies.⁹ Professor Hagen suggests that the incomes of the less developed countries should be multiplied according to the pattern in Table 2-3.¹⁰

⁸A. J. Coale, "Population and Economic Development," The Population Dilemma, ed. Philip M. Hauser (New Jersey: Prentice-Hall, Inc., 1969), p. 59.

⁹Baldwin, Economic Development and Growth, pp. 3-4.

¹⁰Hagen, The Economics of Development, p. 14.

TABLE 2-3

ADJUSTMENTS IN PER CAPITA INCOMES
OF UNDERDEVELOPED COUNTRIES

Per Capita Income (\$)	Multiplier
0-125	3.0
126-375	2.5
376-750	2.0
751-1500	1.5
1500+	1.0

But even if we make the appropriate adjustment described above in the income figure for Antigua, the income gap would still be tremendous. The per capita income of Antigua would then read \$750. If we accept this adjustment as valid, it implies that in fact, Antigua has an income of just over one-fifth of that of the United States, and about one-third of that of Canada.

An important point must be made here. The annual rate of growth of per capita income of the developed countries is greater than that of Antigua, but the annual rate of growth of GNP in Antigua is greater than the average for the developed countries. This is due to the fact that the average annual growth rate of population is greater in

Antigua than in the developed countries (see Table 2-4).

TABLE 2-4

A COMPARISON OF THE RATE OF GROWTH OF POPULATION
IN ANTIGUA AND SELECTED COUNTRIES

Country	Annual Rate of population growth (%) 1963-67
Antigua	2.6
Italy	0.8
Spain	0.8
Norway	0.8
Sweden	0.9
New Zealand	1.5
Germany (East).....	-0.2
Denmark	0.8
Portugal	1.1
United States	1.3
Canada	1.9
France	1.0
Australia	1.9
Japan	1.0
Switzerland	1.3
United Kingdom	0.6

Source: United Nations Statistical Year Book,
1968 (United Nations, New York, 1969).

This implies that the gap is widening, and the fact that the income per capita estimates do not present a true picture, is no ground for denying that the difference in the standard of living in Antigua and the developed countries is real and enormous. But the comparison should not be pressed too far on the strength of the estimates.

B. Production

In Antigua, about 20% of the Gross Domestic Product (GDP) originates from agriculture, whereas the corresponding figure for the advanced countries is only about 12% (see Table 2-5). Thus there is a significant difference in the composition of the Gross Domestic Product in Antigua and the developed countries. Another striking difference that is brought out by the comparison of Antigua with the developed countries is the proportion of the labour force engaged in agriculture. In Antigua, 48% of all employed persons were working in agriculture in 1950.¹¹ This figure has decreased somewhat over the years partly because of poor harvests due to severe droughts, partly because of an increasing negative attitude towards field work, and partly because of the development of the tourist industry which

¹¹This figure does not include persons employed in cane milling. Their inclusion would raise the proportion to about 54%.

TABLE 2-5

PROPORTIONAL DISTRIBUTION OF GROSS
DOMESTIC PRODUCT OF ANTIGUA AND
SELECTED COUNTRIES BETWEEN AGRICUL-
TURE AND MANUFACTURING INDUSTRIES.

Country	Year	Agriculture (%)	Manufac- turing Industries
Australia	1965	10	28
Austria	1966	9	38
France	1966	7	35
Italy	1966	13	29
Japan	1966	12	28
New Zealand	1959	20	22
United Kingdom	1967	3	34
United States	1967	3	28
Sweden	1967	6	32
Norway	1967	7	26
Denmark	1966	10	29
Canada	1967	6	25
Antigua	1963	20	3

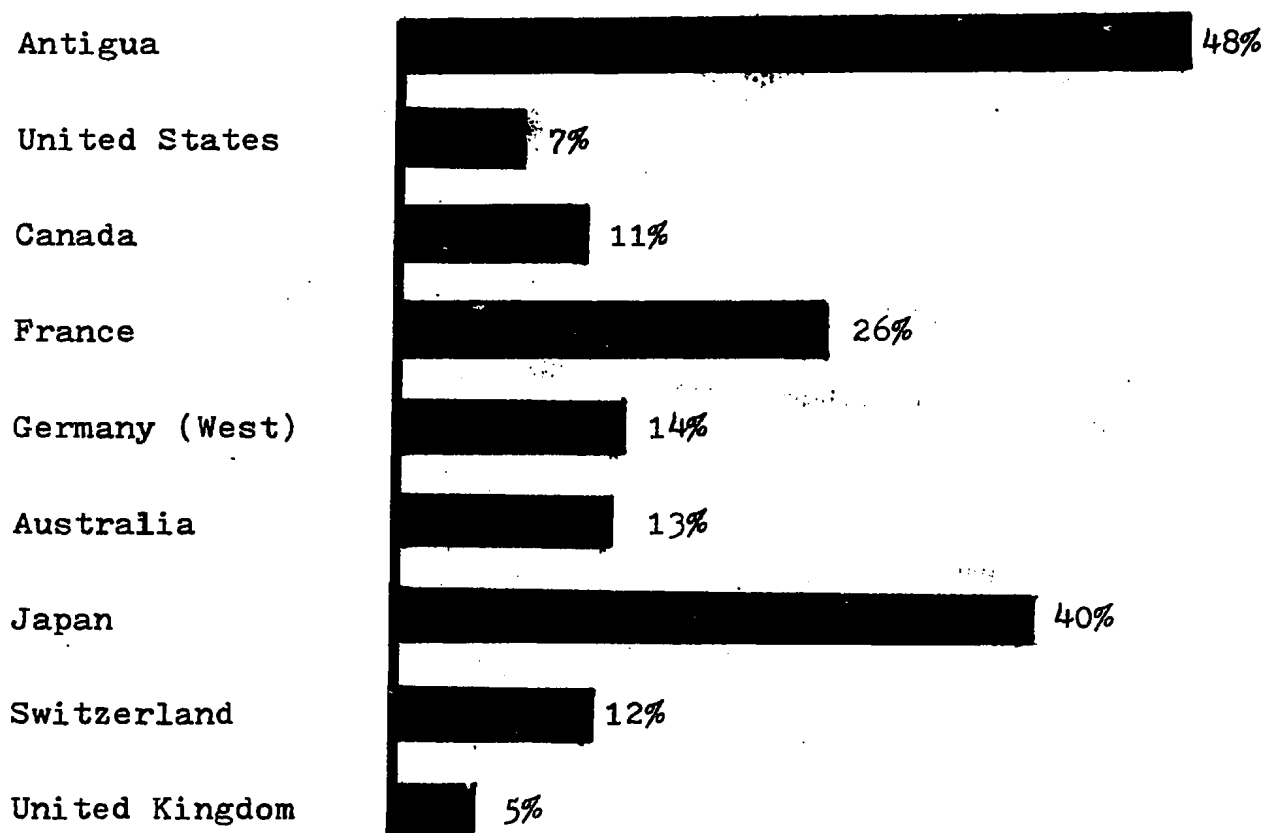
- Sources: 1. United Nations Statistical Year Book, 1968.
2. An Abstract of Statistics of the Leeward Is-lands, Windward Islands and Barbados. No. 2, Statistical Series 1, September, 1966, University of the West Indies.

has attracted many workers. In the developed countries, the proportion of the labour force employed in agriculture is only about 15% on the average, as indicated by Chart 2-1. A farmer in Antigua usually transports his own product and does his own marketing as well. This fact should be taken into account when considering Chart 2-1.

In the advanced countries, the bulk of what is produced is sold on the market. Not so in Antigua. With the exception of sugar and cotton, the bulk of what is produced on the farms of peasants never enters the market, but is consumed directly by the farmer and his family. Only a small surplus is sold in the villages or taken to the city, usually by the wife of the farmer, where she sells it in the market place. An important characteristic feature of farming in Antigua is the fact that the average farm is so small that the farmer is idle for much of the time. On the other hand, a farmer in the advanced countries, though his employment may necessarily be seasonal, is at work for a much longer period than the typical farmer in Antigua.

Another distinction in the production pattern between Antigua and the developed countries pertains to

CHART 2-1

PROPORTION OF ACTIVE POPULATION ENGAGED
IN AGRICULTURE--SELECTED COUNTRIES 1958-63

Sources: 1. United Nations Statistical Year Book, 1968.
2. West Indies Population Census, 1960.

the export sector. Antigua's exports comprise mainly two commodities, namely, sugar and cotton. Total exports of these commodities average over 90% of the total domestic exports of the whole island. Very often, as Table 2-6 shows, not much else is exported besides sugar, cotton, and molasses, and these sometimes mount up as high as 98% of domestic exports. On the other hand, the exports of the developed countries are composed of many different commodities, most of them industrial. One consequence of this dependence on only two export commodities, both of which are agricultural products, and the fact that the prices of agricultural products fluctuate much more widely than do the prices of industrial products, is that Antigua is highly susceptible to changes in international prices. Whereas the developed countries can adjust easily to changes in world conditions of supply and demand, it is virtually impossible for Antigua to make such adjustments.

In the developed countries, a large sum is spent annually on research for the creation of new technology. The amount spent in Antigua in this direction is so small that it can safely be disregarded. The introduction of new technology is an important factor in the production process. The fact that so little is spent in Antigua on

TABLE 2-6

VALUE OF EXPORTS OF MAIN COMMODITIES AND RELATIONSHIP TO TOTAL DOMESTIC EXPORTS OF ANTIGUA. 1948-67

(\\$)

Year	Total Domestic Exports	Sugar	Cotton	Molasses	% of Total
1948	1,677,886	1,341,667	144,808	82,659	93.51
1949	2,869,916	2,123,691	737,946	-	99.71
1950	5,328,784	4,590,505	645,898	30,000	98.82
1951	2,886,375	2,002,814	738,033	87,788	98.69
1952	6,523,711	-	-	-	-
1954	2,598,843	-	-	-	-
1956	6,193,022	-	-	-	-
1957	6,983,250	-	-	-	-
1959	4,818,485	-	-	-	-
1960	3,755,521	3,131,535	321,084	27,029	92.65
1961	3,882,082	3,474,739	185,953	121,324	97.42
1962	4,343,237	3,764,377	303,429	112,946	96.25
1963	6,278,280	5,797,711	233,362	109,749	97.81
1965	2,467,876	2,200,053	131,384	46,571	96.35
1966	485,726	-	293,476	46,603	70.01
1967	1,949,191	-	8,013	-	-

Sources: 1. The West Indies and Caribbean Year Books, 1948-53.
 2. Antigua Report for the Years 1961-64.
 3. Antigua Trade Report, 1967.

research into new technology is not a major setback to the development of the island. Research is very expensive, and a country as poor as Antigua can hardly afford the cost involved. Besides, with the present state of the mass media of communication and modern means of transportation, it is easy to borrow technology from the advanced countries.

There are some other factors which help to bring out the distinction between Antigua and the developed countries, and to give some indication of the stage of development of Antigua. Throughout most parts of the island, water is still carried in buckets on the head; wood for cooking is still carried in bundles on the head from the woods; farm products are still conveyed in baskets on the head or by donkeys from the plots to the villages where a surplus (if any) is sold. Admittedly, these methods are changing slowly, but at the present time, they are the rule rather than the exception.

A quick glance at the nature of the traditional 'factors of production' may throw some light on some of the reasons for the existing gap between incomes in Antigua and the advanced countries. In Antigua, over 40% of the

total population is less than 15 years old, and just over 50% is between the ages 15 and 64. Less than 5% is over 64 years old (see Table 2-7).

TABLE 2-7

POPULATION OF ANTIGUA AND THE UNITED STATES CLASSIFIED BY AGE GROUP, AND EXPRESSED AS A % OF TOTAL POPULATION

1950		
	Antigua	United States
Age Span	% of total population	% of total population
Less than 15 years	40.2	27.0
15-64	44.1	64.8
64+	15.7	8.2
1960		
Less than 15 years	43.0	31.4
15-64	52.7	59.9
64+	4.3	8.7

- Sources: 1. West Indies Population Census, 1960.
2. Report on Unemployment in the Presidency of Antigua by Simon Rottenberg and Nora Siffleet, (Labour Dept., Antigua, 1951).
3. Donald J. Bogue, The Population of the United States (New York: The Free Press, 1959).

In the developed countries, about 30% of the total population

is under 15 years of age, while about 62% is between 15 and 64 years old. The specific figures for the United States in 1950 and 1960 are given in Table 2-7. What I am trying to point out is that in Antigua, there is a high proportion of people who are out of the labour force but who nevertheless have to be supported. This fact partly contributes to the income differential between Antigua and the developed nations.

There is also a considerable difference between the quality of labour in Antigua and the advanced countries. In Antigua, there is a lack of skills among workers, and the level of education is appreciably lower than it is in the advanced countries. Development depends to a great extent on trained manpower. This subject will be considered in greater detail in Chapter III below. Capital is accumulated at a much higher rate in the developed countries than in Antigua. A very general picture of conditions in Antigua has been presented in the foregoing pages. The stage is now set for a more detailed study of the problems and prospects of development in Antigua.

CHAPTER III

POPULATION AND EMPLOYMENT

1. POPULATION

A. The Demographic Aspect

Prior to the discovery of Antigua by Columbus, the island was inhabited by a race known as the Arawaks. They were a peaceful race and a pleasant and simple people whose occupation was hunting and whose religion was a mixture of nature worship and ancestor worship. There is a possibility that the island may have been previously inhabited by Ciboneys or Igneris about whom nothing seems to be known.¹

The Caribs, a more warlike race than the Arawaks, were next to enter the island. They were given to cannibalism and fought with the Arawaks whom they quickly exterminated. When Columbus landed in Antigua, the Caribs and the Arawaks were the only two races of people that he met on the island. Today, there are no traces of either Arawaks or Caribs in Antigua, but a handful of Caribs are still to be found on the neighbouring island of Dominica.

¹See Sir Allan Burns, History of the British West Indies (London: George Allen and Unwin Ltd., 1954), p. 35.

The Composition of the Population

Racial Composition

An overwhelmingly large proportion of the island's population is of African descent. From the 16th Century to the early 19th Century, Negro slaves were brought chiefly from West Africa to the island to work on the plantations. In the 35 years between 1720 and 1755, Antigua imported 37,500 slaves.² This number represents about 7,730 more people than the entire population of the island in 1921. Other races represented are European, and a small number of Asiatics (East Indians, Chinese and Syrians). In 1946 when the population was 41,757, more than 35,000 or 84.9% were of African descent, 700 or 1.6% European, and 5,400 or 13% mixed.³ There are therefore no natives of Antigua in the strict sense. The proportion of the population of African origin has increased to 92.9% in 1960, while the proportion of Europeans has fallen to 1.3% of the total population. The numbers and relative proportions of the racial groups in 1960 are shown, according to districts, in Table 3-1.

²H. V. Wiseman, A Short History of the British West Indies (London: University of London Press Ltd., 1950), p. 58.

³Morley Ayearst, The British West Indies (London: George Allen and Unwin Ltd., 1960), p. 64.

TABLE 3-1
POPULATION OF ANTIGUA BY DISTRICT
AND RACIAL ORIGIN. 1960

District	Africans		Europeans		Asiatics		Mixed		Others		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
St. John's City	19,237	35.6	265	0.5	76	0.14	1218	2.2	600	1.1	21,396	39.9
St. John's Rural	6,523	12.1	215	0.4	1	0.00	153	0.3	422	0.8	7,314	13.5
St. Mary	6,963	12.8	9	0.0	1	0.00	104	0.2	44	0.1	6,851	12.6
St. Paul	6,183	11.4	22	0.04	2	0.00	205	0.4	72	0.1	6,484	12.0
St. Philip	3,974	7.3	22	0.04	-	-	56	0.1	12	0.0	4,064	7.5
St. Peter	3,150	5.8	12	0.0	1	0.00	21	0.04	32	0.1	3,216	5.9
St. George	3,068	5.7	174	0.3	8	0.0	108	0.2	215	0.4	3,573	6.6
Barbuda	1,138	2.1	1	0.0	-	-	14	0.02	9	0.0	1,162	2.1
Antigua	50,236	92.9	720	1.3	89	0.2	1,879	3.5	1406	2.6	54,060	100.0

Source: West Indies Population Census, 1960.

Despite the smallness in numbers of the Asiatics, they have been particularly active on the economic scene. The role of these immigrants in developing countries in general is described by Bauer and Yamey:

They have accumulated capital, provided skills and aptitude not present or developed among local people, and have pioneered in the development of trade, transport, and industries. By permeating the economy more extensively than the establishments and activities of the large-scale European mercantile, industrial, mining or plantation concerns, their influence has generally been more wide-spread and has affected large numbers of local people directly.

The Syrians have been dominant as storekeepers in Antigua, and this partly explains the heavy concentration of Asiatics in the city. Only in recent years have others entered this line of business. Chinese and East Indians have never been numerous in the island and this is a surprising fact because they exist in fairly large numbers on other West Indian islands. Recently, however, a number of Chinese restaurants have been opened up on the island, and this is a sign that they are moving into the island in greater numbers.

Age Structure

The age structure of the population is important because it determines the size of the labour force and

⁴Bauer and Yamey, p. 107.

the number of non-earning dependents who have to be supported by the economy either because they are of the school age or because they are not of the working age. The age structure is also important since it provides an indication of the direction towards which the future population is likely to move. Only recently has there been any significant improvement in public health services and sanitation. As a result, a large proportion of the population is comparatively young as shown in Table 3-2. The heaviest concentration is between the ages 1-14, the peak being the 5-9 age group which forms more than 14% of the total population.

Sex Composition

The sex composition of the population is significant because of its influence on the work force participation in various occupations. Certain types of occupations are considered to belong to men, and others to women. If members of one sex enter into occupations which are acclaimed to belong to the other sex, the society regards them with a sort of disapproval. Consequently, there is a great reluctance for people to accept certain jobs. For example, in the late 1950's, an attempt was made to recruit male nurses. Only two males found the courage to enrol. A similar attempt to recruit female police

TABLE 3-2
POPULATION OF ANTIGUA BY 5 YEAR AGE
GROUP AND SEX. 1960

Age Group	Total	%	Male	%	Female	%	Masculinity Rate
Under 1	1,749	3.23	877	1.62	872	1.61	100.57
1- 4	6,584	12.17	3296	6.09	3288	6.08	100.24
5- 9	7814	14.45	3910	7.23	3904	7.22	100.15
10-14	7007	12.96	3507	6.49	3500	6.47	100.20
15-19	5375	9.94	2549	4.71	2826	5.23	90.19
20-24	4024	7.44	1890	3.59	2134	3.94	88.56
25-29	3209	5.94	1461	2.71	1748	3.23	83.58
30-34	2996	5.54	1397	2.59	1599	2.95	87.36
35-39	2682	4.96	1210	2.24	1472	2.72	82.20
40-44	2678	4.95	1217	2.25	1461	2.70	83.29
45-49	2588	4.78	1222	2.26	1366	2.52	89.45
50-54	2179	4.03	949	1.76	1230	2.27	77.15
55-59	1488	2.75	609	1.13	879	1.62	69.28
60-64	1278	2.36	442	0.81	836	1.55	52.87
65-69	818	1.51	279	0.52	539	0.99	51.76
70-74	624	1.15	179	0.33	445	0.82	40.22
75+	967	1.79	236	0.44	731	1.35	32.28
All ages	54,060	100.00	25230	46.67	28830	53.33	87.51

Source: Calculated from West Indies Population Census, 1960.

constables around the same time was equally unsuccessful. It seems, however, that an increasing number of females are now entering occupations and professions which were formerly considered the domain of males. In 1964, there were three female police officers,⁵ and at present, a few more are being recruited. There are at least two service stations where female attendants are employed. There is also a female lawyer and a few female taxi drivers.

To overcome this problem requires a change of attitude among the population. This can be achieved only by education. By teaching children at school that men and women should be free to choose any occupation which they feel capable of performing, and that there is no valid reason why men should not be nurses as well as masons, and women painters as well as secretaries, the society will, after a time, come to accept the fact that competence is not necessarily associated with any particular sex. People will come to realize that as long as a job is done well, it does not matter whether the worker is a male or a female. This, of course, is a lengthy process, but it is the only practical way to tackle the problem of sex discrimination with regard to occupations, and precipitate the change which is already in motion.

⁵Antigua Report for 1964.

Table 3-2 shows that out of a population of 54,060 in 1960, there were 25,230 (about 47%) males and 28,830 (about 53%) females. The adult population represented 57.2% of the total population. This consisted of 25.2% males and 32.0% females. Table 3-2 also gives the masculinity rate of the population in five year age groups. The masculinity rate measures the number of males to every hundred females in the population. It will be observed that the proportions of males and females in the population between the ages one to fourteen are quite close. In the higher age groups, the proportion of females exceeds the proportion of males.

Religious Composition

The Church of England was established in Antigua fairly early after the colonization of the island. There was a church in 1672 but it was for the Whites and not for the Negro slaves. The christianization of the coloured people was left to the missionaries of the Moravian and Wesleyan churches. The churches in Antigua were instrumental in providing education for the natives. The entire population belongs to the Christian religion, but the number of religious denominations is fairly large considering the size of the island. The denominational composition of the population has significance for population policy. For

example, birth control methods are likely to be resisted among members of the Roman Catholic Church. In 1960, as Table 3-3 shows, about 42% of the population consisted of Anglicans. Other denominations with significant membership are the Moravian (19%), Methodist (12%), and Roman Catholic (8%). The numbers and percentages of the population belonging to each religious denomination are presented in Table 3-3.

The distribution of the population

In a large country, or in a country where transportation services are highly inadequate, there is a tendency for the population to be concentrated in areas where jobs can easily be found, or at least, where people think there are good job opportunities. Although these factors may be operative forces in Antigua, their influence is less noticable than would be the case in a large country. Antigua is so small, that there is never a great distance between people's homes and the places where they work. Besides, the system of transportation is comparatively adequate in many areas of the island. Nevertheless, a certain definite pattern can be discerned in the distribution of the population. A survey of unemployment in Antigua in 1950 indicated that in that year, less than 23% of the population lived in the city. By 1960, this

TABLE 3-3

POPULATION OF ANTIGUA BY RELIGION AND SEX
AS A PER CENTAGE OF TOTAL POPULATION 1960

Religious Denomination	Total	%	Males	%	Females	%
Anglican	23,032	42.60	11,000	20.35	12,032	22.26
Baptist	36	0.06	15	0.03	21	0.04
Christian Brethren ...	29	0.05	14	0.03	15	0.03
Church of God	232	0.43	100	0.18	132	0.24
Disciples of Christ ...	16	0.03	12	0.02	4	0.00
Jehovah's Witness	134	0.25	67	0.12	67	0.12
Methodist	6,988	12.93	3,225	5.96	3,763	6.96
Moravian	10,533	19.48	4,910	9.08	5,623	10.40
Pentecostal	877	1.62	361	0.67	516	0.95
Pilgrim Holiness	3,111	5.75	1,276	2.36	1,835	3.39
Presbyterian	53	0.10	31	0.06	22	0.04
Roman Catholic	4,672	8.64	2,144	3.96	2,528	4.67
Salvation Army	292	0.54	114	0.21	178	0.33
Seventh Day Adventist	2,911	5.38	1,297	2.40	1,616	2.99
Others	1,144	2.12	664	1.23	478	0.88
Total: All Religions ..	54,060	100.00	25,230	46.67	28,830	53.33

Source: West Indies Population Census, 1960.

figure had risen to over 39%. The distribution of the population is given in Table 3-4.

Many factors are responsible for this movement of the population away from the rural areas to the city. First, many of the children who attend secondary schools in the city, board there with relatives or friends during the schooling period. When they graduate from these schools, they become so accustomed to the city and the way of life there that many of them decide against returning to the villages and so remain in the city. Secondly, the declining interest in agriculture has led many people away from the rural areas in search of other occupations around the city. Thirdly, a few of the people from the country who work in establishments around the city find it easier to obtain transportation to work from the city than from the villages, so they move to the city. In this group can be included those who work at the hotels. Most of the hotels provide transportation for their employees to and from the city. This has caused a few people to move away from the rural areas to the city. Finally, some people move to the city because they think that city living has more prestige than country living. This feeling is demonstrated in such derisive terms as 'country booby' and 'bush people' which some people from the city apply to country dwellers.

TABLE 3-4

THE DISTRIBUTION OF THE POPULATION
AMONG THE VARIOUS DISTRICTS 1960

Districts	Total	%	Males	%	Females	%	Masculinity Rate
St. John's City	21,396	39.57	9,683	17.91	11,713	21.66	82.66
St. John's Rural	7,314	13.52	3,437	6.35	3,877	7.17	88.65
St. Mary	6,851	12.67	3,293	6.09	3,558	6.58	92.55
St. Paul	6,484	11.99	3,106	5.74	3,378	6.24	91.94
St. Philip	4,064	7.51	1,843	3.40	2,216	4.09	83.16
St. Peter	3,216	5.94	1,540	2.84	1,676	3.10	91.88
St. George	3,573	6.60	1,789	3.30	1,784	3.30	100.28
Barbuda	1,162	2.14	534	0.98	628	1.16	85.03
Antigua	54,060	100.00	25,230	46.67	28,830	53.32	87.51

Source: West Indies Population Census, 1960.

Population Growth

The population of Antigua has increased from 29,769 in 1921 to about 64,000 in 1967. Table 3-5 shows that the population declined somewhat between the years 1871 to 1881 and again from 1891 to 1921. Since 1946, the population has been increasing steadily. It will be observed that from 1955 to 1960, the average annual rate dropped from 3.06% to 0.80%. Table 3-6 shows that the rate of natural increase rose from 1.28% in the period 1921-1946 to 2.29% in the period 1946-1960. This increase is likely to continue as improvements in public health services and sanitation are eradicating or controlling many of the endemic diseases that used to claim so many lives. Details of public health are relegated to a later section. If the population continues to grow at this rate, it means that it will double itself in the next forty years or so. The following are some of the causes of the increase in the population.

The death rate has been declining over the past years. This is particularly so in the case of infant mortality. In 1946, the death rate was 1.49%. By 1965, it had fallen to the low figure of 0.84%. The infant

TABLE 3-5.

POPULATION, DENSITY PER SQ. MILE, AND
AVERAGE ANNUAL GROWTH PER CENT 1871-1967.

Year	Population	Density per Sq. Mile	Average Annual Growth %
1871	35,157	325	
1881	34,964	323	-0.06
1891	36,819	341	0.05
1901	34,971	323	-0.05
1911	32,269	299	-0.08
1921	29,769	276	-0.07
1946	41,757	387	1.61
1952	48,360	447	2.63
1953	49,000	454	1.32
1955	52,000	481	3.06
1956	52,640	487	1.18
1960	54,304	503	0.80
1964	59,357	549	2.32
1967	64,000	593	2.61

- Sources:
1. United Nations Demographic Year Books 1954-65.
 2. West Indies Year Books 1946-53.
 3. Antigua Report 1961-64.
 4. C. O'Loughlin, Economic and Political Change in the Leeward and Windward Islands (New Haven: Yale University Press, 1968).

TABLE 3-6

POPULATION OF ANTIGUA
NATURAL INCREASE 1946-60

Year	Census Population	
1921	29,800	
1946	41,800	
1960	54,000	
Intercensal Increase		
Year	Annual Increments	Rate of Increase (%)
1921-46	480	1.36
1946-60	900	1.86
Natural Increase		
Year	Annual Increments	Annual Rate of Increase (%)
1921-46	460	1.28
1946-60	1,110	2.29

Source: Edwin P. Reubens, "Migration and Development in the West Indies" (Studies in Federal Economics, No. 3, University College of the West Indies, Jamaica, W.I.).

mortality rate has decreased from 8.8% in 1954 to 4.5% in 1965. Improvements in public health services, better nutrition, improvements in pre-natal and post-natal care, and a greater reliance on scientific treatment provided by those in the medical profession are contributory factors in the declining death rate. On the other hand, the birth rate has decreased only slightly. In 1946, it was 3.7% and in 1965 it was 3.04%. The birth rate, death rate, and the rate of natural increase from 1946 to 1965, and the infant mortality rate from 1954 to 1965 are shown in Table 3-7. In the late 1950's, a number of Antiguan migrants migrated to the United Kingdom, and this helped to relieve the problem considerably, by reducing the rate of increase of the population. The following table shows the migration from the island in the years 1958 to 1960.

TABLE 3-8
EMIGRATION TO THE UNITED KINGDOM
1958-1960

Year	Migration	Per Cent of Labour Force
1958	422	2.19
1959	353	1.93
1960	741	4.06
Total (3 years)	1,516	-

Source: R. B. Davison, West Indian Migrants (London: Oxford University Press, 1962).

TABLE 3-7
VITAL STATISTICS OF ANTIGUA 1946-65

Year	Birth		Death		Rate of Natural Increase	Infant Mortality	
	Number	Rate (%)	Number	Rate (%)		No.	Rate(%)
1946	1,553	3.71	624	1.49	2.22		
1947	1,634	3.82	703	1.64	2.18		
1948	1,557	3.58	788	1.81	1.77		
1949	1,577	3.58	523	1.19	2.39		
1950	1,683	3.74	535	1.19	2.55		
1951	1,676	3.62	605	1.31	2.31		
1952	1,612	3.39	526	1.11	2.28		
1953	1,687	3.45	599	1.23	2.22		
1954	1,660	3.31	532	1.06	2.25	146	8.80
1955	1,880	3.62	516	0.99	2.63	119	6.33
1956	1,917	3.62	497	0.94	2.68	109	5.69
1957	1,764	3.20	512	0.93	2.27	117	6.63
1958	1,818	3.21	551	0.97	2.24	149	8.20
1959	1,831	3.14	517	0.89	2.25	122	6.66
1960	1,878	3.08	538	0.88	2.20	129	6.87
1961	1,768	2.84	503	0.81	2.03	97	5.49
1962	n.a	2.79	405	0.63	2.16	n.a	4.20
1963	1,833	2.99	574	0.94	2.05	100	5.46
1964	1,886	3.12	501	0.83	2.29	90	4.77
1965	1,742	3.04	484	0.84	2.20	79	4.54

Source: United Nations Demographic Year Books, 1955-67.

There has also been some migration to the U.S.A, Canada and the U.S. Virgin Islands. But the doors for emigration to these countries are gradually closing, and it is therefore unlikely that such opportunities as existed in the 1950's will again present themselves.

The Population Problem

Concern over the rapid growth of population goes as far back as Malthus whose fear was that the population growth would outstrip the food supply and thus reduce man's standard of living to very low levels. The rate of growth of population threatens the economy of Antigua at present. The population is projected to reach a total of 106,710 in 1990 (see Table 3-9).

TABLE 3-9

POPULATION OF ANTIGUA 1960 AND 1964 WITH PROJECTIONS FOR 1970, 1980 AND 1990, DENSITY PER 100 ACRES AND PER 100 ACRES IN FARMS

Year	Population	Population Per 100 acres	Population Per 100 Acres in Farms
1960	54,060	49.68	158.58
1964	58,358	54.57	174.19
1970	68,024	62.52	201.36
1980	85,030	78.15	253.71
1990	106,710	98.07	313.02

Source: C. O'Loughlin, Economic and Political Change in the Leeward and Windward Islands.

In 1964, as can be seen from Table 3-9, there were approximately fifty-four persons to every hundred acres of land. By 1990, the figure is projected to be about ninety-eight persons to every hundred acres. Table 3-9 also shows that in 1964, there were about 174 persons to every hundred acres in farms. By 1990, there will be about 313 persons to every hundred acres in farms. The rapid population growth is an obstacle to development because it severely delimits the amount of capital with which each person has to work. The rate of growth of GDP in Antigua has been greater than the rate of growth of the population over the past few years as Table 3-10 indicates. Over the period 1955-1964, the GDP increased by more than 100%, whereas the population increased by only about 14%. But the fact that the GDP is growing at a faster rate than the population does not eliminate the problem. The relevant question is not so much whether the growth of GDP will continue to outstrip the rate of growth of the population, but rather how much more rapidly the development process could advance if the present rate of population growth could be checked. A reduction in the rate of growth of population will certainly help to improve the standard of living in Antigua because it would enable people to enjoy the benefits of better nutrition, it would facilitate the improvement in health and education and so

TABLE 3-10

THE RATE OF GROWTH OF GDP AND
POPULATION OF ANTIGUA 1955-64

Year	GDP (\$mn)	Rate of Growth of GDP (%)	Rate of Growth of Population(%)
1955	12.4	-	2.63
1956	15.9	28.2	2.68
1957	18.1	13.8	2.27
1958	18.0	- 0.5	2.24
1959	20.9	16.1	2.25
1960	21.3	1.9	2.20
1961	22.0	3.3	2.03
1962	22.5	2.3	2.16
1963	24.8	10.2	2.05
1964	25.1	1.2	2.29

Sources: 1. An Abstract of Statistics of the Leeward Islands, Windward Islands and Barbados. No. 2 Statistical Series 1. University of the West Indies, September 1966.

2. United Nations Demographic Year Books, 1955-67.

lead to a more efficient labour force, and this would then lead to a larger total income.

The problem of a high rate of growth of population may not be so great in a country with a large quantity of natural resources at its disposal. But in a small island like Antigua where capital is scarce, and where the paucity of natural resources can hardly be exaggerated, a growth of population of over 2% per annum is one of the obstacles to development. There are obvious advantages to be derived from a reduction in the rate of growth of population. In the first place, a reduction in fertility implies that there will be a reduction in the proportion of children in the population, and this in turn makes possible an increase in savings. The expenditures that would be made to support the children could go towards the promotion of a faster rate of growth of the national product. The implicit assumption is that the community's marginal propensity to consume out of a given income is less than unity. The assumption is also made that if the additional income or some part of it is taxed away, it will go into government savings. Secondly, a smaller population would mean that the national income has to be divided among fewer people, so that a larger share goes to each person. This assertion obtains from the

assumption that a reduction in the population will not reduce the productive capacity of the economy. This is a reasonable assumption in view of the amount of unemployment and underemployment existing in the island.

Population growth can be checked by an increase in the mortality rate, migration, or by a decrease in the birth rate. Of these measures, a decrease in the birth rate seems to be the most practical policy for Antigua. The development of modern methods of contraception has made it comparatively easy to deal with the problem of population. To deal effectively with this problem would require the establishment of a centre for birth control. This will probably work best if it is incorporated in the health programme. The centre would require a qualified staff to organize meetings in the various villages so that people will become aware of the methods of contraception and be motivated to adopt them.

Educational programmes pertaining to family planning should be instituted, and mass communication should be employed to spread the message on an island-wide basis. This should include frequent discussions on radio and television on the subject of birth control, and booklets and posters should be widely distributed throughout the island.

Filmstrips should also prove successful in this programme. The centre for birth control could ask movie proprietors to run a ten or fifteen minutes filmstrip on family planning and methods of birth control before the feature movie begins. This should spread the message to the less educated people who have the largest families. The centre should also supply contraceptives at a subsidized price to married couples, and make them available without too many complications.

B. Education, Public Health and Housing

The Evolution and development of Education in Antigua.

Education in Antigua followed the general pattern observed in many other colonies throughout the world. The first schools were established by denominational bodies and friendly societies independent of the government. Then the government gradually entered the field of education and eventually assumed full responsibility for providing education, at least at the primary level. Before the abolition of slavery in 1834, several church schools were established in Antigua. The Anglicans, Methodists and Moravians operated schools throughout the island on various estates. Joseph Sturge and Thomas Harvey visited the island in 1836 for the purpose of ascertaining the actual condition of the inhabitants of the island, and they reported that the island

possessed schools in abundance.⁶

The Nico Charity deserves special mention. Following the abolition of slavery, the organization began its educational operations in the West Indies, and it established a training institution in Antigua. As late as 1912, almost all the elementary schools in the island were still denominational. There were only two government operated schools, and government grants were given to only two secondary schools.⁷

The concepts of secondary and elementary schools as applied to the Antiguan context, need to be explained. A secondary school in Antigua consists of children of all ages ranging from about seven to nineteen years. Tuition therefore ranges accordingly from the lowest level to the General Certificate of Education, Ordinary or Advanced level. The elementary or primary schools consist of students of the ages five to sixteen or seventeen, and tuition ranges from the lowest level to what is known as the post-primary level. The post-primary is two years of schooling beyond the primary level.

⁶Joseph Sturge, and Thomas Harvey, The West Indies in 1837 (London: Hamilton, Adams and Co., 1838), p. 31.

⁷Algernon E. Aspinall, The British West Indies, Their History, Resources and Progress (Boston: Little, Brown and Co., 1912), p. 296.

Very few of the elementary schools have continued to be denominational as the government has almost completely taken over elementary education. With the secondary schools, the situation is different. Only recently, in 1964, did the government take over two secondary schools from the Anglican Diocesan Council which was formerly responsible for the administration of those schools. Most of the secondary schools are still operated by private enterprise and by denominational organizations.

Although the denominational schools accept students of any denomination, the enrolment in any one of them consists largely of students of that particular denomination. Secondary education was for a special privileged class, and the child of humble birth, whatever his scholastic ability, had no chance of obtaining a secondary education. Despite the fact that a secondary school was established in the island as early as 1884, this difficulty in gaining admission into a secondary school persisted into the 1950's. Even up to about twenty years ago, when an application was made for a child to enter a secondary school, the home from which the child came had to be investigated before the child was admitted. If it were discovered that the child came from a home which did not measure up to some established standard, admission would be refused to that child, and thus the opportunity of obtaining a secondary education would be lost

forever. However, the provision of free secondary education for a limited number of students, the increase in the number of secondary schools which admit all classes of students, and the general democratization of secondary education, have made it possible for a greater number of students to benefit from secondary education.

Today the government provides free primary education for all. The present system is administered by the department of Social Services, the chief executive being the Minister of Social Services. The chief executive staff of the Education Department consists of:

- Education Officer
- Inspectors of Schools (two)
- Supervisor of Home Economics
- Supervisor of Infant Teaching
- Supervisor of Girls' Handicrafts
- Supervisor of Boys' Handicrafts
- In-service Training Officer

The administration of secondary education is left up to the parties who own the schools, and does not come under the direct control of the government via the Department of Education. There are at present, approximately fifty-three schools of which about twelve are secondary. Four of these

secondary schools are government operated. The non-government secondary schools are supported by fees from the students, and a few of them receive grants from the government. Table 3-11 shows the number of the different types of schools in the island during 1962-64.

School Enrollment

The growth of the population, particularly of the school age group, has caused a steady increase in enrollment in both elementary and secondary schools. From 1946 to 1964, the population increased from 41,757 to about 60,000 or by 43.7%. Enrollment over the same period increased from 7,454 to 17,058 or by 128.8%. The increase in the school population over the period 1945 to 1964 is given in Table 3-12. Parents used to keep their children away from school to help on the farms, some stayed away for lack of clothes, and some stayed away from school for no particular reason. Elementary education in Antigua is compulsory, and at one time, parents were taken to court for not sending their children to school. An officer assigned to the Education Department used to seek out children who stayed away from school and take them back. Over the last few years, as the development of the island improved, and as people began to appreciate the need to educate their children, attendance at schools increased considerably. In 1945, of the 7,012 students

TABLE 3-11
 TYPES OF SCHOOLS, ENROLLMENT AND STUDENT-TEACHER
 RATIO IN ANTIGUA 1962-64

Types of Schools	1962				1963				1964			
	No.	Roll	Teach- ers	Student- teacher Ratio	No.	Roll	Teach- ers	Student- teacher Ratio	No.	Roll	Teach- ers	Ratio
Government Pri- mary with post- Primary	33	12,202	290	42.2	33	11,832	289	40.3	34	12,212	290	42.3
Non-assisted Primary	9	1,606	40	40.6	8	1,618	40	40.2	9	1,812	50	36.1
Government Secondary	2	570	29	19.2	2	546	30	18.6	3	1,196	56	21.2
Grant-aided Secondary	4	1,122	53	21.9	4	1,213	55	22.3	2	526	19	27.1
Non-assisted Secondary	4	1,231	42	29.1	4	1,325	42	31.2	4	1,312	44	29.4
Total (Primary and Secondary)	52	16,731	454	36.4	51	16,534	456	36.1	52	17,058	459	37.7

Source: Calculated from Antigua Report, 1961-64.

TABLE 3-12

GROWTH OF SCHOOLS, ENROLLMENT, AND
ATTENDANCE IN ANTIGUA FROM 1945 TO
1953 AND FROM 1962 TO 1964

Year	Number of Schools	Enrollment	Average Attendance	Average atten- dance as % of Enrollment
1945	28	7,012	4,506	64.26
1946	28	7,454	4,489	60.22
1947	28	7,454	4,489	60.22
1948	30	8,403	5,655	67.29
1950	32	8,742	6,516	74.53
1951	32	8,656	5,872	67.83
1952	33	9,372	6,555	69.94
1953	34	9,526	6,980	73.27
1962	52	16,731	n.a.	n.a.
1963	51	16,534	n.a	n.a
1964	52	17,058	n.a	n.a

Sources: 1. West Indies Year Books, 1945-1953.
2. Antigua Report, 1961-1964.

enrolled in schools, the average attendance was 4,506 or 64.2%. The attendance improved steadily to 73.3% in 1953 (see Table 3-12). Today, the attendance is considered to be such that there is no need for the enforcement of the attendance law mentioned above.

When the government took over the schools from the churches, the buildings were generally in very poor condition, and facilities were grossly inadequate. These same buildings and poor facilities were used under the government system. The increase in enrollment and attendance made it imperative that better provisions be made, so the government embarked on a school building programme. There are now approximately forty government schools in the island as compared with only twenty in 1945, an increase of about 100% over the twenty-five years. Table 3-12 shows the increase in the number of schools from 1945 to 1964.

Curriculum

The Antigua educational system is concerned mainly with formal education, and very little attention is given to vocational or practical training. This system is a relic of the past when proficiency in such subjects as History, Geography and Literature was considered to be far superior to training in the various trades. An element

of practical training is introduced in the primary schools. Courses in Home Economics, Boys' Handicraft and Girls' Handicraft are being given. Two secondary schools now offer courses in book-keeping, typing, office practice and business English. There is only one technical school in the whole island, and although it is fairly well equipped, its operation is hampered by the lack of qualified instructors.

Secondary education in Antigua is more English than it is West Indian, and this is largely a result of the arrangement for the examination of students. Students from the secondary schools take the Cambridge General Certificate of Education (G.C.E) examination at the Ordinary or Advanced level. The syllabus is sent down from England, and the schools arrange their programmes to meet the demands of the Cambridge syllabus. The aim of every secondary school in the island is to get as many students as possible to pass this G.C.E examination. The examinations reflect the environment and knowledge of the examiners, and since they are not West Indians, the questions they set hardly relate to an environment to which the students are accustomed and in which most of them will spend their lives. This is not to suggest that the field of knowledge of the West Indian students should be restricted to the

West Indian community. But it seems reasonable that the pattern of education should be in the direction of producing men and women who will be better able to play more active roles in the community in which they live. Very little consideration is given to the future employment of students. Eric Williams records that on one occasion, the candidates in a G.C E. examination were asked to write a composition on "A Day in Winter."⁸ This supports my contention that the questions set in the examination are sometimes entirely unrelated to things West Indian, and since the curriculum is based on these examinations, it does not relate to the future needs of the students.

Teachers

In Antigua, there is a dreadful lack of trained teachers at all levels. In most cases, the teachers have no formal training at all in their field. Teachers for the elementary schools are usually recruited from the post-primary classes or from secondary schools, and are sent straight from the classrooms to be teachers. There are cases where teachers have not even completed the post-primary level. I attended a public meeting a few years

⁸Eric Williams, Education in the British West Indies (New York: University Place Book Shop, 1968), p. 32.

ago when a government minister announced that they were trying to staff all their secondary schools with teachers whose minimum qualification was the G.C.E. , Ordinary level. He added, quite seriously, that "anything could do for the elementary schools." In 1962, a system was introduced whereby a few of the teachers are given a short course before taking up their duties. There is much to be gained by this system as the teachers are able to approach their tasks with a greater degree of confidence, and as students tend to have a greater regard for a trained rather than an untrained teacher.

There are many secondary schools with teachers who have not completed high school. With a few exceptions, the staff of the secondary schools consists of teachers with no degrees and no training at all in education. The Teachers' Training College trains a number of teachers each year, and although the teachers are mainly from the elementary schools, the institution has done much to increase the over-all number of trained teachers in Antigua. In 1966, a study of education in Antigua revealed that of 311 teachers in government schools, fifty-two or 16.3% had the G.C.E or equivalent, 39.2% were without certificates, and only 44.5% were trained.⁹ The following table summarizes

⁹R. Bent, G. Clough, and R. Jordan, "Economic Development in the Eastern Caribbean Islands," University of the West Indies Institute of Social and Economic Research (Eastern Caribbean), August, 1966. p. A6.

the staffing condition of the government operated schools in 1966.

TABLE 3-13

STAFFING IN GOVERNMENT OPERATED SCHOOLS 1966

Secondary Schools						
School	Graduates	Non-graduates	Visiting staff	Total	Roll	Staffing Ratio
Girls' High School	5	9	1	14	307	21.9
Grammar School	6	8	-	14	325	22.9
Princess Margaret School	5	17	1	22	569	25.8
Primary and Post-primary						
Head Teacher	Assistants (trained)	Teachers with G.C.E	Uncertificated	Total		
Grade I	16	-	-	-	16	
Grade II	18	83	30	152	283	
Total	34	83	30	152	299	

Source: R. Bent, G. Clough, and S. Jordan, "Economic Development in the Eastern Caribbean Islands," University of the West Indies Institute of Social and Economic Research (Eastern Caribbean), August, 1966.

Adult Education

A system of night school for adults was established in Antigua some years ago. Under this system, called the General Improvement Organization (GIO), a number of adults who left school without a primary school certificate obtained formal training and qualified for the certificate. The Extra Mural Department of the University of the West Indies established a branch in Antigua. The Department offers courses leading up to the G.C.E. Ordinary and Advanced levels, and a number of adults have made good use of this opportunity. But the Department's programme is designed for people who have achieved a certain level of literacy, and no arrangement is made whereby adults can complete a level of education equivalent to the Post-Primary if they so desire.

The training of apprentices is undertaken by the Industrial Training Committee. The Labour Department, in conjunction with the Hotel Association, provides training for receptionists, desk clerks and cashiers. Training is also given in welding, pipe-fitting, cooking, motor car maintenance, radio technology, electrical and underwater welding. It must be pointed out that enrollment in these courses is limited to only a few people. Statistics on

the number of people enrolled in these courses are not available. Scholarships are awarded by the Canadian and British Governments and by several other organizations whereby students can acquire a university education.

The Financing of Education in Antigua.

The concept of education as an investment good is a fairly recent development. Education was normally considered as a consumption good because people derive satisfaction from it; they value it in itself and spend their incomes on it. It is now generally agreed that education is not only a consumption good but it is also an investment good because it increases the future earning power of the recipients and positively affects the performance of the economy to which they will contribute.

Government expenditure on education in Antigua is a fairly recent phenomenon, and even when the government started to give financial support to education, the sums donated formed only a small proportion of total government expenditure (see Table 3-14). Richards claimed that "apart from Montserrat and the Virgin Islands, Antigua spent the least amount of money on education in the British Caribbean."¹⁰

¹⁰N. Richards, The Struggle and the Conquest (Antigua. Workers Voice Printery), p. 13.

TABLE 3-14

GOVERNMENT EXPENDITURE ON EDUCATION 1946-66

(\$)

Year	Total Expenditure	Expenditure on Education	% of Total Expenditure	Cost per student enrolled
1946	1,536,840.00	48,386.40	3.14	6.49
1947	1,739,188.80	104,640.00	6.01	14.03
1948	2,162,875.20	103,557.00	4.78	12.32
1949	2,143,529.00	174,331.00	8.13	n.a
1950	3,038,798.00	175,450.00	5.77	20.06
1951	3,482,488.00	211,000.00	6.02	24.37
1961	9,956,561.00	854,146.00	8.57	n.a
1962	9,165,726.00	763,114.00	8.32	45.61
1963	9,024,061.00	957,285.00	10.60	57.89
1964	9,120,824.00	1,029,637.00	11.28	60.36
1966	10,795,100.00	1,234,600.00	11.43	n.a

Sources: 1. West Indies Year Books, 1945-1953.

2. Antigua Report, 1961-1964.

3. Antigua Estimates for the Year 1966 (Antigua: Government Printing Office, 1966).

In 1938, Antigua spent only \$2,880 on education. This amount increased over the years as the government continued to assume the responsibility of educating its people. In 1948, the amount spent on education was \$103,557 or 4.7% of total government expenditure, an increase of 3495% over the 1938 figure. By 1966, the government spent a grand total of \$1,234,600 or 11.4% of total government expenditure on education. Table 3-14 contains information on government expenditure on education from 1946 to 1966. The increase in expenditure on education may be taken to reflect the realization that education is a great benefit to the whole society and not just to the recipient of the training.

Some of the denominational and privately operated schools obtain a grant from the government, but the bulk of the cost is borne by the students who pay 'term' fees. This cost includes the salaries of teachers, rent for buildings, and other operating expenses. The distribution of government funds between the various types of education for 1961-64 is given in Table 3-15.

Educational Attainment

Illiteracy cannot be considered a pressing problem in Antigua. The 1960 census revealed that only 4.9% of

TABLE 3-15

DISTRIBUTION OF GOVERNMENT FUNDS BETWEEN
VARIOUS TYPES OF EDUCATION FOR 1961-64

	(\$)			
Expenditure Heads	1961	1962	1963	1964
Administration: primary, post-primary and government secondary schools	507,964	644,175	724,424	905,418
Assisted secondary schools	83,964	117,549	110,903	12,638
Teachers training college	43,920	45,578	64,310	53,933
University of the West Indies, Extra Mural work	600	600	600	600
Scholarships overseas	9,000	-	n.a	n.a
Grant to the University of the West Indies	-	-	53,784	53,784
Grant to the Institute of Education, U.W.I	-	-	3,264	3,264

Source: Antigua Report, 1961-1964.

the population over 10 years was illiterate (see Table 3-16). A greater problem seems to be lack of the right type of training. The following table shows the educational attainment of adults fifteen years old or older in 1960.

TABLE 3-16

NUMBER OF ILLITERATES AND PER CENTAGE ILLITERACY OF
OF THE POPULATION 10 YEARS AND OVER BY DISTRICT AND SEX 1960.

District	<u>Residents 10 years and over</u>			<u>Illiterates</u>			<u>% Illiteracy</u>		
	Total	Males	Females	Total	Males	Females	T.	M.	F
St. John's City	15,676	6,850	8,826	564	237	327	3.6	3.5	3.7
St. John's Rural	5,178	2,347	2,831	265	129	136	5.1	5.5	4.8
St. Mary	4,534	2,137	2,397	355	183	172	7.9	8.6	7.2
St. Paul	4,286	1,983	2,303	252	111	141	5.9	5.7	6.2
St. Philip	2,747	1,193	1,554	108	59	49	4.0	5.0	3.2
St. Peter	2,176	1,012	1,164	154	62	92	7.1	6.2	7.9
St. George	2,534	1,267	1,267	91	50	41	3.6	4.0	3.3
Barbuda	782	358	424	51	25	26	6.5	7.0	6.1
Antigua	37,913	17,147	20,766	1,840	856	984	4.9	5.0	4.8

Source: West Indies Population Census, 1960.

TABLE 3-17
EDUCATIONAL ATTAINMENT OF ADULTS
15 YEARS AND OLDER

Educational level	% of Population 15 years and older
Primary Only	83.1
Secondary (without certificate)	9.4
Secondary (with certificate)	1.9
University	0.4
No education and unclassified	5.2
Total (all levels)	100.0

Source: West Indies Population Census, 1960.

The results of the Cambridge examination have been generally poor over the years, and this is due partly to the poor quality of the teachers and the inadequate facilities with which they work. An analysis of the 1964 Cambridge results is given in Table 3-18. It will be observed that the Ordinary level results on a whole have been better than the advanced level. A percentage pass of 36.1 is recorded for students at the Ordinary level. Only 16.4% pass is recorded for students at the Advanced level.

The results of the Post-primary examination have been better than those of the Cambridge examination. The

TABLE 3-18

ANALYSIS OF 1964 CAMBRIDGE EXAMINATION RESULTS

Subjects	<u>Ordinary level</u>			<u>Advanced level</u>		
	Entries	Passes	%	Entries	Passes	%
General Paper	-	-	-	18	0	0
English	171	40	23.5	9	1	11.1
English Literature	116	42	36.2	-	-	-
History	80	44	55.5	6	1	16.6
Bible Knowledge	140	74	52.1	-	-	-
Geography	15	7	46.6	-	-	-
Latin	39	15	38.4	8	3	37.5
French	72	11	15.3	10	1	10.0
Spanish	4	1	25.0	-	-	-
Mathematics	64	23	37.5	7	2	28.5
Additional Mathematics	1	0	0.0	1	0	0.0
Chemistry	4	4	100	3	2	66.6
Physics	-	-	-	4	1	25.0
Biology	7	3	42.8	-	-	-
Health Science	70	14	20.0	-	-	-
Art	30	10	33.3	1	0	0
Cookery	16	11	70.5	-	-	-
Woodwork	2	2	100.0	-	-	-
Needlework	1	0	0	-	-	-
Total	832	301	36.1	67	11	16.4

Source: R. Bent, G. Clough, R. Jordan.

explanation may be that the examination at this level is more related to the experiences of the students and so they are better able to cope with it. In addition, the teachers are more qualified to deal with students at the lower level than at the G. C.E. level. The persistently high percentage of passes at one secondary school where the staff is quite qualified, suggests that better Cambridge results can be obtained with more qualified teachers. The Post-primary results for the years 1960-64 are shown in Table 3-19.

TABLE 3-19
RESULTS OF THE POST-PRIMARY EXAMINATION 1960-64

Year	Entries	Passes	% Passed
1960	117	56	48
1961	115	58	51
1962	206	76	37
1963	226	67	30
1964	157	72	46
Total	821	329	40

Source: Bent, Clough, and Jordan.

Education and Development in Antigua

This section examines some contributions of education to the development of Antigua. The impact of education on the occupational structure, unemployment and the labour force, incomes, and population will be studied.

Education and the Occupational Structure

In any economy, whether developed or underdeveloped, the type of work in which people are engaged is related to their educational attainment. A certain minimum level of education is a prerequisite for entrance to various occupations. As Edmund deS. Brunner and Sloan Wayland have phrased it, "The days when a high school graduate could 'read' law or medicine with a successful practitioner of these professions and eventually qualify as a lawyer or doctor are over."¹¹ In 1950 when the educational attainment of the population of Antigua was much lower than it is today, most of the people had to be satisfied with occupations which did not require high levels of education. Thus about 55% of all employed persons were engaged in agriculture (including fishing and cane milling).

As the educational level increased, an increasing

¹¹Edmund deS. Brunner and Sloan Wayland, "Occupation and Education" Education, Economy, and Society, ed. A. H. Halsey, Jean Floud, and C. Arnold Anderson (New York: The Free Press of Glencoe, Inc., 1961), p. 55.

number of people moved to occupations which their higher educational attainment allowed them to cope with. In 1960, only about 37% of all employed persons were engaged in agriculture. On the other hand, in 1950, 7.7% of the working population was engaged in manufacturing industries, 3.8% in construction, and 17.2% in services. In 1960, the percentages in each of these sectors had increased. There were 13.4% in manufacturing industries, 13.6% in construction and about 28% in the service industries. The percentage of employed persons engaged in selected industries in 1950 and 1960 is given in Table 3-20.

TABLE 3-20
DISTRIBUTION OF EMPLOYED PERSONS
BETWEEN SELECTED INDUSTRIES IN 1950 AND 1960

Industry	Percentage	
	1950	1960
Agriculture	48.8	34.26
Fishing	2.2	3.26
Manufacturing	7.7	13.42
Construction	3.8	13.63
Transportation	3.0	6.57
Commerce	7.6	10.00
Services	17.2	28.29

Sources: 1. Rottenberg and Siffleet.

2. West Indies Population Census, 1960

A caveat must be issued here. The entire decrease in the percentage of employed persons engaged in agriculture, and the corresponding increase in the proportion engaged in other industries should not be attributed to educational improvement alone. Developments in other areas have a large share in changing the occupational structure. To take just one example, the development of the tourist industry is responsible for a large part of the shift from agriculture to other sectors of the economy. However, it must be realized that developments in these other sectors could not have reached their present level in the absence of better education.

Education, Employment and the Labour Force

Statistics are not available for unemployment according to the level of educational attainment in Antigua, but there can be no doubt that the unemployed group consists mainly of people with low standards of education and little or no skill. The unemployment rate decreased from 18.5% in 1950 to about 7% in 1960. This reduction is due partly to the increase in the educational standards of the population. As the country develops, new jobs are created, and the development of skills and the improvement of literacy help to make people eligible for these new jobs. The general improvement in the education of the labour force increases

the productivity of the whole economy, and as productivity increases, so does labour incomes.

Education and Income

One of the main reasons for the investment in education is that it increases future incomes. The more education a person has, the greater his income is likely to be. A number of studies, particularly by American economists, have proved this assertion to be true. H. P. Miller has come up with the following figures for lifetime earning with various levels of education.¹²

TABLE 3-21

LIFE EARNING ACCORDING TO EDUCATIONAL ATTAINMENT

Level of Education	Life Earning (\$)
Elementary School:	
Fewer than 8 years	143,000
8 years	184,000
High School:	
1-3 years	212,000
4 years	247,000
College:	
1-3 years	293,000
4 years	385,000
5 or more years	455,000

¹²Herman P. Miller, Rich Man, Poor Man (New York: Crowell, 1964), p. 145.

The highly paid jobs are taken up by the people with high educational standards. A greater number of people have acquired and are continuing to acquire higher levels of education. This means that a larger number of people have moved and are moving into higher earning occupations, and this in turn means an increase in labour incomes. As incomes increase, the government revenue also increases by way of higher taxes. Revenue from income tax in 1964 was \$1,107,700. By 1966 it had increased to \$1,275,000.

Education and Population

Education has helped to reduce the population problem in two main ways. First, with the improvement of education, more people have taken to family planning. In Antigua, the people with the largest families are those with the lowest levels of education. Again, no statistics are available to support this averment, but the author has lived in the island for twenty-eight years, and is therefore well acquainted with the existing conditions. Secondly, education has increased the incentive to emigrate.. People with very low levels of education and no skills are hesitant to leave home for fear of not being able to find employment abroad. Moreover, the policies of the immigrant countries

are such that preference is given to immigrants who have certain types of skills. Therefore, the people who leave home are those with a certain level of education and some skill. It is unfortunate that an underdeveloped country should lose its trained manpower to some other country, but people who migrate out of the country contribute through remittances and by helping to relieve the population pressure.

Recommendations for Educational Improvement

The curriculum of primary and post-primary schools should include gardening and woodwork. Each school should have a school garden where practical gardening can be carried on. This would help to correct the tendency to regard agricultural employment as degrading work. The children in most secondary schools do not get any opportunity to study the science subjects owing to the lack of a laboratory and qualified teachers. The secondary schools could unite and build a laboratory at one of the schools. This would enable a number of students to study science subjects in addition to the arts subjects which they are presently studying.

Antiguan students would be much better off if their examinations were administered by the University of the West

Indies. The content of the examination would be of a West Indian flavour and the school curriculum would be more suitable to the West Indian community. A few more secondary schools need to offer courses in book-keeping, typing and other commercial courses, so that students leaving secondary schools will be better equipped for the civil service and business offices which are developing in the economy.

A concerted effort should be made to ensure that all teachers obtain formal training. The minimum requirement for entry into the teaching profession should be the G.C.E. Ordinary level, and teachers of the upper forms of secondary schools should possess at least the G.C.E. Advanced level in the subjects which they teach.

A system of education for adults should be introduced. This should be administered by the Department of Education. The main purpose of this system should be to provide some education for adults who do not possess a primary education, but it should also cater for those who wish to improve their standard up to the post-primary level. Those who wish to continue their studies beyond the post-primary level are able to do so by attending the classes offered by the Extra-Mural Department. The help of qualified and interested persons in the various villages

could be enlisted to teach evening classes in their own districts. This would eliminate the cost of transportation that would be incurred if instructors had to conduct classes away from their homes. Books and other supplies should be the responsibility of the adults for whom the classes are convened. In addition, they should be charged a small tuition fee to help to defray the expenses incurred in the provision of adult education. The payment of tuition fees by these adults will help to encourage them to make good use of the opportunity offered to them. Fees are also justified on the grounds that those who obtain a better education could be expected to earn greater incomes.

A technical school is greatly needed in Antigua. This would serve the purpose of training people for employment in the various industries to be established. Jobs which Antiguan could not fill for lack of skills would now be taken up by Antiguan, and this would also help to solve the unemployment problem. Those who emigrate from the island would possess some skills and would be able to earn more abroad, thus remittances to the island would increase, and at the same time, the unemployment and population problems would be relieved.

Public Health.

The condition of public health in Antigua has improved significantly over the past 25 years, and this is reflected in the decline of the mortality rate, especially infant mortality. The extensive application of preventive medicine has eradicated diseases such as malaria, sleeping sickness and yellow fever which used to claim many lives. Since these diseases have been eradicated from the island, expenditure has shifted from preventive medicine to curative medicine.

There is a shortage of doctors and nurses. In 1964, there were only 16 doctors serving a population of about 59,357. This gives one doctor for about 3,710 people. In the same year, there were 570 hospital beds, giving one hospital bed for 104 people. These ratios compare favourably with those in the other islands of the Eastern Caribbean (see Table 3-22), but they are still significantly below those of more advanced countries.

Expenditures on medical and health services increased from \$1,251,164 in 1961 to \$1,334,095 in 1964. Table 3-23 shows expenditure on medical and health services for the years 1961-1964.

Sanitation must be kept up to high standards not only for the benefit of the members of the community, but

TABLE 3-22

COMPARISON OF DOCTORS AND HOSPITAL BEDS IN ANTIGUA
AND OTHER EASTERN CARIBBEAN ISLANDS 1964

Island	Population	No. of Doctors	Hospital beds	Population- doctor ratio	Population- Hospital bed ratio
Antigua	59,357	16	570	3,710	104
Barbados	244,169	106	1,580	2,303	155
Dominica	65,901	11	383	5,991	172
Grenada	94,249	32	623	2,945	151
Montserrat	14,017	3	69	4,672	203
St. Kitts, Nevis Anguilla	59,303	15	216	3,954	274
St. Lucia	92,500	17	437	5,441	212
St. Vincent	87,000	14	471	6,214	185

Source: Abstract of Statistics.

TABLE 3-23

EXPENDITURE ON MEDICAL AND HEALTH
SERVICES FROM 1961-64

	(\$)			
Items	1961	1962	1963	1964
Medical General:				
Personal Emoluments	166,562	154,455	174,598	178,568
Other Charges	50,819	40,780	60,540	60,755
Central Board of Health:				
Personal Emoluments	89,902	86,033	100,590	102,876
Other Charges	253,535	242,656	240,321	255,026
Holberton Hospital:				
Personal Emoluments	240,368	235,648	264,761	291,936
Other Charges	217,963	220,538	200,287	210,645
Fiennes Institute:				
Personal Emoluments	18,032	17,538	18,891	19,343
Other Charges	41,825	38,459	39,080	38,944
Mental Hospital:				
Personal Emoluments	77,874	74,257	78,403	79,088
Other Charges	61,221	62,932	56,871	62,005
Leper Home:				
Personal Emoluments	12,431	11,479	12,259	12,466
Other Charges	16,582	15,573	20,378	19,015
Grants-in Aid	4,050	3,428	3,428	3,428
Total	1,251,164	1,203,777	1,270,407	1,334,095

Source: Antigua Report, 1961-1964.

also to ensure the continuing viability of the tourist industry. The tourist industry is largely a personal service industry and therefore demands special standards of health and hygiene. The Central Board of Health, a government body, is responsible for the hygiene and sanitation of the island, and the work of this board has greatly improved the sanitation of the island.

Housing

As late as 1950, housing in Antigua was in an extremely poor state. Many of the houses were built of wattle and plastered with mud and consequently earned the name "wattle and daub". Novelle Richards describes the housing condition thus:

Crude wattle and daub huts with thatched roof and earth floor provided shelter for many workers, some of whom did not have beds, but slept on straw covered with crocus bags....¹³

In 1950, the housing condition was not quite as bad as the description just quoted. Most of the houses had wooden floors, but the roofs were still made of cane trash (dried

¹³Richards, p. 12.

cane leaves). The revolution in housing in Antigua may be said to have started in 1950 after the hurricanes. Under the government system of "self-help", people obtained better houses on very easy terms.

The improvement in housing brought about by this scheme has helped to improve the health conditions of the people. But over-crowding is still a problem in the island, and in the face of rapid population growth, the problem is likely to grow worse unless steps are taken to avoid such an occurrence.

2. EMPLOYMENT

Unemployment is one of the great problems of Antigua. A large army of unemployed people is a potential source of discontent and social uprising. A survey of unemployment in Antigua reveals that in 1950, 18.5% of the adult population was unemployed. The corresponding percentage in 1960, as revealed by the census of that year, was 7.2%. Although the figure has decreased considerably from 1950 to 1960, the situation is actually worse than it seems. The 7.2% given here does not include under-employment and disguised unemployment, and since 1966, a number of job opportunities disappeared with the closing of the Antigua Sugar Factory. Table 3-24 contains detailed information

TABLE 3-24

LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT BY SEX, EXPRESSED AS
A PERCENTAGE OF THE ADULT POPULATION 1950 AND 1960.

							1950
Group	Total	%	Males	%	Females	%	Masculinity Rate
14 years and older	26,000	100.00	10,710	41.2	15,290	58.8	70.04
Out of the labour force	6,800	26.15	850	3.3	5,950	22.9	14.3
In the labour force	19,200	73.84	9,860	37.9	9,340	35.9	105.56
Employed	14,400	55.4	7,980	30.7	6,420	24.7	124.29
Unemployed	4,800	18.46	1,880	7.2	2,920	11.23	64.38
							1960
14 years and over	32,223	100.0	14,295	44.36	17,928	55.64	79.73
Out of labour force	14,011	43.48	2,828	8.77	11,183	34.70	25.28
In the labour force	18,212	56.51	11,467	35.58	6,745	20.93	170.00
Employed	15,873	49.25	9,932	30.82	5,941	18.43	167.17
Unemployed	2,339	7.25	1,535	4.76	804	2.49	190.92

Sources: 1. Rottenberg and Siffleet.

on unemployment figures for 1950 and 1960. It will be observed that in 1950, the size of the labour force was larger than in 1960. This is due largely to the fact that children were staying at school longer in 1960 than they were in 1950. Emigration in the late 1950's is also a contributing factor. If higher standards of living are to be achieved, positive action will have to be taken to deal with the unemployment problem.

Causes of Unemployment

One of the main causes of unemployment in Antigua is over-population. If more land was available, a large number of unskilled labour could find employment on the land. But the situation at present is such that already there are too many people 'on the land,' and consequently, there is a considerable amount of under-employment. Very often also, the situation exists where the marginal product, though it may not be zero, is less than the average product, and as more people are brought unto the farms, the average product per worker is pulled down. This is a case of disguised unemployment.

Another principal cause of unemployment in Antigua is the operation of trade unions. This may at first seem paradoxical since the main function of a trade union is to act in the interest of its members, and certainly, unemploy-

ment, far from being in the interest of workers, is rather detrimental to them. Quite frequently, the aim to secure higher wages conflicts with that of maintaining a high level of employment, and in most cases, when there is a conflict between these two ends, it is the latter that is sacrificed. For many years, the Antigua Trades and Labour Union has been the most powerful single force in the social and political history of the island. Many of the union officials have had short courses in trade unionism in England, Canada and the United States. These three countries are among the advanced countries of the world, and their trade union movements are not applicable to the Antiguan situation. However, very little thought is given to this simple fact, and what happens is that the officials of the Antigua Trades and Labour Union (and also the recently formed Antigua Workers Union) have tried to operate the local unions along lines observed in England, Canada and the United States. The policies that are often followed by the union leaders are such that they do not take into account the repercussions of their actions on employment opportunities. Almost every major employer in Antigua has a contract with either of the trade unions. The hotels, the construction companies, the air lines and most of the other business firms all have contracts and agreements

with the trade unions.¹⁴ These unions sometimes demand such high wages for their members, even in the face of a high level of unemployment, that it is impossible for the demand for labour to expand and absorb the unemployed.

A third cause of unemployment is the attitude towards work and leisure. The Antiguan worker tends to place a tremendously high value on leisure. Some writers explain this attitude in terms of the climate. They claim that the heat puts a severe limit to man's mental and physical energy. However, B. H. Hodder who made a study of development in the tropics, does not seem to share this view. He agrees that the tropical climate is far from stimulating, but he pointed out that traditional ideas about the ill effects of climate on comfort and energy should not be allowed to obstruct the improvement of life in the tropics.¹⁵

Many Antiguan workers accept work for a few days. When they think they have earned enough money to support themselves and their families for a while, they stay away from their jobs.¹⁶ This is an example of the backward

¹⁴Report of the Labour Department for the year ending 31st August, 1968. pp. 7-8

¹⁵Hodder, p.56.

¹⁶Simon Rottenberg, "Income and Leisure in an Underdeveloped Economy" Underdeveloped Areas, ed. Lyle W. Shannon, (New York: Harper and Brothers, 1957), p. 153.

sloping supply curve for labour and may have something to do with slave mentality. Slaves used to do just enough work to avoid the slave-driver's whip. Since over 90% of the population consists of the descendants of slaves, it is likely that this attitude towards work can be traced right back to the pre-emancipation period. An increase in wages will not be an incentive for these people to work harder. On the contrary, they may work for fewer hours, since their limited wants will be more quickly satisfied at a higher wage rate. A number of workers had to be imported from St. Lucia and St. Vincent to help to reap the cane crop. In 1963, 103 workers were imported from St. Vincent and in 1964, 105 were imported from St. Lucia.¹⁷ The ironical part about this situation is that a number of workers usually crowd the Labour Office in an endeavour to secure tickets to go over-seas to perform the same tasks which they refuse at home. The average Antiguan looks upon certain types of jobs as being degrading, so he will not accept such employment even if his skill is such that it hardly fits him for any other kind of occupation. The number of people who behave in this manner is rapidly diminishing, but it is still sufficiently large to merit

¹⁷Antigua Report for 1963 and 1964, p. 6.

consideration.

Finally, a large part of the unemployment in Antigua is the result of lack of skills. Very rarely is a skilled workman unemployed. In fact, there is sometimes a demand for skilled labour, but because of lack of skills, workers from other countries have to be called in to take up the jobs. The problem then with this kind of unemployment is not on the demand side but on the supply side. This is the phenomenon sometimes referred to as 'structural unemployment.' Antiguan often complain that new industries do not employ sufficient local workers. The truth is that the local workers lack the necessary skills to perform the tasks.

There is a growing illusion that employment opportunities are more easily found around the city than in the rural areas. Consequently, a few unemployed persons migrate to the city only to find that the prospects of finding employment are no better than they are in the rural areas. In many cases, employment could be found in agriculture, but very few people are willing to accept agricultural employment. In 1950, only one-third of the unemployed males whose usual occupation was in agriculture were looking for this work. The same situation existed

in the case of unemployed females.¹⁸ With the development of other sectors of the economy which provide a greater scope for escape from agriculture, it is likely that the reluctance to accept agricultural employment has been greatly intensified since 1950. Usually, the occupations available in and around the city require some skill or some minimum level of education, a requirement which many workers who migrate from the rural areas are unable to fulfil. As a direct result of this, one finds that there is a fairly large percentage of unemployment in the city. In 1950, 24% of all adult persons in St. John's were found to be unemployed, while only 18.5% were unemployed in the island as a whole (see Table 3-25). The table also shows that in 1960, 6.1% of the adult population in St. John's was unemployed while the figure for the island as a whole was 7.2%. A few industries have been established in the vicinity of St. John's, and these have helped to relieve the unemployment situation to a considerable extent, by offering jobs to those who can meet the necessary requirements. Of special importance in this respect are the service industries which are rapidly developing largely as a result of the growth of the tourist industry.

¹⁸Rottenberg and Siffleet, p. 9.

TABLE 3-25

EMPLOYMENT AND UNEMPLOYMENT BY DISTRICT AS A PERCENTAGE OF TOTAL
ADULT POPULATION 1960 AND 1950

District	Adult popu- lation	1960						1950			
		Out of the labour force		In the labour force				Percentages			
				Employed		Unemployed		Out of the la- bour force		In the labour force	
		No.	%	No.	%	No.	%			Employed	Unem- ploy- ed Total
St. John's City	13,489	6,010	44.5	6,654	49.3	825	6.1	27.6		48.4	24.0 72.4
St. John's Rural	4,466	1,988	44.5	2,085	46.7	393	8.8	-		-	- -
St. Mary	3,747	1,748	46.6	1,785	47.6	214	5.7	18.7		62.6	18.7 81.3
St. Paul	3,495	1,612	46.1	1,568	44.8	315	9.0	33.6		53.5	12.9 66.4
St. Philip	2,340	880	37.6	1,239	52.9	221	9.4	21.6		68.8	9.6 78.4
St. Peter	1,824	683	37.4	931	51.0	210	11.5	25.4		73.0	1.6 74.6
St. George	2,201	813	36.9	1,279	58.1	109	4.9	19.2		71.2	9.6 80.8
Barbuda	661	277	41.9	332	50.2	52	7.8	-		-	- -

Sources: 1. West Indies Population Census, 1960

2. Rottenberg and Siffleet.

Policies for Reducing Unemployment

An important question may now be asked. What measures can be adopted to reduce unemployment in Antigua? Some suggestions to deal with the problem follow naturally from the causes mentioned above. The problem of unemployment and disguised unemployment on the farms can be greatly reduced, if not solved, by developing the industrial sector so that labour can be drafted from the land into the expanding industrial sector. A model based on the inter-action of the industrial sector and the agricultural sector is presented in Chapter V below. The measures recommended above for dealing with over-population will also help to reduce the amount of unemployment in the island. But the impact of birth control will not be felt for some time. The number of people who are of the working age will remain fairly constant for some time after family planning and birth control have been instituted. New jobs will be created as the economy develops, and as the population growth slows down, there will be fewer persons looking for jobs. Reducing unemployment by checking the rate of growth of population is therefore a very long-term process. Other measures whose impact will be more quickly felt must be adopted.

Unemployment caused by the action of trade unions is a thorny problem in Antigua, mainly because the unions are directly affiliated with the political parties. In fact, in a very real sense, it is correct to say that the unions are the political parties. Any measures that would interfere with the activities of the unions are likely to trigger off tensions that may well have serious social and economic effects. For this reason, there is not much that can be done in the way of direct policies to curb the excessive wage demands made by these unions. Perhaps persuasion that it would be in their interest sometimes to sacrifice higher wages for a greater volume of employment is the most practical policy. At present, minimum wage rates designed to protect workers against exploitation by employers have been established in various industries. A reversion of this policy, i.e., the establishment of maximum wage rates, would only cause wide-spread disturbances.

Voluntary unemployment and under-employment which result from the unwillingness of workers to stay on the job after they have earned a certain amount of money can be greatly reduced by education. Education widens the whole range of goods and services which individuals may

enjoy. Education creates and increases the demand for books, better clothing, better diet, better housing and indeed, a better way of life altogether; and the desire for these goods and services will act as an incentive for people to spend a longer time at work to be able to afford them.

Vocational training will also help to reduce the volume of unemployment in the island. There is an urgent need for this type of training which will enable men and women to fit into the developing economy. Vocational training is grossly inadequate in Antigua, and the island stands to gain a great deal from this development.

Emigration is sometimes suggested as a way of dealing with the unemployment problem. But the people who emigrate are usually the skilled workers whose contribution the island can ill afford to lose. Moreover, the opportunities for emigration are highly dependent on conditions abroad, so it can hardly be considered an effective local policy.

An unemployment office should be set up in the Labour Department with the function of providing information about available jobs. This office should have the authority of deducting a certain amount from employees'

wages to help to build up an unemployment fund. This would help to relieve the hardship which is experienced by the unemployed, and to produce a better atmosphere of social order.

CHAPTER IV

AGRICULTURE AND FOREIGN TRADE

1. AGRICULTURE

In many developing countries, certain common features can be identified in the agricultural sector of the economy. The amount of land which each farmer has to cultivate is small, and farming techniques are, to a large extent, primitive. The extent to which these conditions prevail in Antigua will occupy a good portion of this chapter. The equipment of the typical farmer in Antigua comprise a hoe, a fork, a cutlass, a bill (used mainly to harvest sugar cane), and a pickaxe. Consequently the productivity and incomes of farmers are low. In spite of these drawbacks, agriculture has been, until quite recently, the source of almost all the export earnings and an overwhelmingly large proportion of the GDP. As an economy develops, the share of agriculture in the GDP declines, whereas the share of manufacturing and other industries increases. This trend is most conspicuous in the Antiguan economy as can be seen from Table 4-1. In 1953, the share of agriculture (including fishing and livestock) was approximately 44.9% of GDP. By 1964, it had decreased to about

TABLE 4-1

ORIGIN OF GDP EXPRESSED AS A PERCENTAGE OF GDP 1953-59 and 1960
SELECTED INDUSTRIES

Industry Group	1953		1954		1955		1956		1960
	Amt.	%	Amt	%	Amt	%	Amt	%	
Export Crops	3,557	29.4	2,105	19.6	2,968	23.9	3,879	24.3	3,557
Other Agriculture, Fishing, Livestock	1,876	15.5	1,902	17.7	1,971	15.9	1,937	12.1	1,876
Manufacture	80	0.6	87	0.8	89	0.7	91	0.6	80
Construction and engineering	1,362	11.3	1,404	13.1	1,404	11.3	1,419	8.9	1,362
Distribution ...	1,554	12.8	1,692	15.8	1,709	13.8	1,729	10.8	1,554
Transport	531	4.4	549	5.1	561	4.5	578	3.6	531
Catering and entertainment	1,513	12.5	1,513	14.1	1,648	13.3	1,682	10.5	1,513
Rent of dwellings	1,205	9.9	1,229	11.5	1,229	9.9	1,242	7.8	1,205
Government	1,887	15.6	1,812	16.9	2,490	20.1	2,935	18.4	2,887

Sources: 1. C. O'Loughlin, "Problems in the Economic Development of Social and Economic Studies, Vol. 10, No. 3, Jamaica, 1961.

2. An Abstract of Statistics.

1953-59 and 1963-64

\$000

1956		1957		1958		1959		1963		1964	
Amt	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%
3,879	24.3	3,792	20.9	3,017	16.5	3,690	17.6	3,382	13.6	2,533	10.1
1,937	12.1	1,993	11.0	2,035	11.2	2,167	10.3	1,131	4.5	1,164	4.6
91	0.6	98	0.5	109	0.6	111	0.5	665	2.6	683	2.7
1,419	8.9	1,561	8.6	1,632	8.9	1,773	8.5	3,999	16.1	4,434	17.6
1,729	10.8	1,813	10.0	1,848	10.1	2,210	10.5	3,869	15.6	3,870	15.4
578	3.6	624	3.4	664	3.6	740	3.5	970	3.9	1,026	4.1
1,682	10.5	1,867	10.3	2,027	11.1	2,237	10.7	3,438	13.9	3,652	14.5
1,242	7.8	1,292	7.1	1,317	7.2	1,366	6.5	1,650	6.6	1,675	6.6
2,935	18.4	2,871	15.8	2,958	16.2	3,300	15.7	4,744	19.0	5,043	20.0

c Development of Antigua"
1961.

14.7% of GDP. On the other hand, the share of manufacturing industries increased from 0.6% in 1953 to 2.7% in 1964.

Despite the fact that the importance of agriculture in the GDP of Antigua has declined over the years, agriculture still employs a large proportion of the labour force.

Crops produced for export and those produced for local consumption have different roles in the economy, and a discussion of agriculture in Antigua should make the distinction between these different roles. This should not involve too much difficulty since there are only two crops that are produced specifically for export. The distinction between subsistence agriculture and cash agriculture should likewise be made. Subsistence agriculture has been defined differently by different people. To avoid any confusion, it is important to understand the sense in which it is used here. The term subsistence agriculture is used in contradistinction to cash agriculture, so it means nothing more than the production of crops not for cash. To make this distinction is a considerably more formidable task. The difficulty arises mainly from the fact that the farmer grows his crop (sugar-cane and cotton excepted) partly for direct personal consumption and partly for cash exchange.

Whether production is for cash or for direct personal consumption depends chiefly on the nature of the crop and on the yield in any particular year. Sugar-cane is not directly consumed as a food, but it is processed into granulated sugar. Thus this crop is grown as a cash crop to be sold to the factory. Likewise, cotton has to be processed, so it is cultivated for sale. Crops such as yams, potatoes, corn and peas, are subsistence crops or cash crops depending again on the yield and on the farmers' food requirements.¹ If the harvest is an extremely good one in any particular year, some farmers may find themselves with a surplus which they can sell. There are a few farmers, however, who cultivate such crops expressly for sale. Sugar cane and cotton are the only two crops grown for export.²

The Structure of Agriculture in Antigua.

The existence of two different types of agriculture is a basic feature of agriculture in Antigua. The large

¹Since a cornmeal factory has been constructed on the island, the production of corn is shifting from a subsistence crop to a cash crop.

²In strict terms, it is cane sugar rather than sugar cane that is exported.

estates produce sugar-cane for export, and the peasants produce sugar-cane and cotton for export, and other crops for local consumption.³ The dichotomy between small farmers and large estate holdings is an important one, and it permeates the whole pattern of production. Small farmers produce, on an average, about 35-40% of the sugar-cane crop. The following table shows the percentage of sugar-cane produced by small farmers from 1955 to 1959.

TABLE 4-2

PERCENTAGE OF CANE PRODUCED BY SMALL FARMERS
FROM 1955-59

Year	% produced
1955	37.9
1956	46.0
1957	37.8
1958	40.1
1959	30.9

Source: Simon Rottenberg, Report on the Sugar Industry of Antigua (Antigua: Government Printing Office, 1960).

Production on the estates takes a different form from production on the small holdings of the peasants.

³The estates produce a small amount of cotton for export and some other crops for local consumption.

The estates hire managers, overseers and labourers. They use relatively large amounts of capital equipment, large amounts of land and better technology than do the peasant farmers. The estates also use chemical fertilizers while peasants who cannot afford them use dried animal dung.

This, as Colin Clark and Margaret Haswell pointed out, make a most valuable form of manure.⁴ More than 18% of the farms in Antigua are less than one acre each, and represent approximately 1.6% of the total acreage under cultivation. About 88% of them are less than four acres each and cover about 27% of the land under cultivation. On the other hand, approximately 0.53% of the farms are more than two hundred acres each and represent about 56% of the arable land (see Table 4-3).

The predominance of small farms in Antigua is an impediment to greater productivity in the agricultural sector. As can be seen from Table 4-3, there are 5,747 farms in Antigua; 1,077 of these are less than one acre, with an average of 0.5 acres. There are 4,009 farms which are between one and four acres, averaging 2.1 acres.

Almost all the farm lands in Antigua were owned

⁴Colin Clark and M. Haswell, The Economics of Subsistence Agriculture (London: Macmillan and Co., Ltd.,

TABLE 4-3

ACREAGE IN FARMS, NUMBER OF FARMS
BY SIZE GROUPS, AND ACREAGE PER FARM 1961

Acre	No. of farms	% of total number of farms	Acreage of farms	% of to- tal farm area	Acreage per farm
Less than 1	1,077	18.70	546	1.60	0.50
1-4	4,009	69.75	8,611	25.26	2.15
5-9	373	6.49	2,323	6.81	6.23
10-24	69	1.20	962	2.82	13.94
25-49	23	0.40	739	2.16	32.13
50-99	11	0.19	755	2.21	68.64
100-199	7	0.12	978	2.87	139.71
200-499	16	0.28	4,824	14.15	301.80
500+	15	0.26	14,351	42.09	956.11
All farms	5,747	100.00	34,089	100.00	5.94

Source: An Abstract of Statistics.

by resident European families and absentee landlords, some of whom owned up to two or three estates. The coloured indigenous people owned very few large holdings, and these were the less fertile plots, being either marginal or submarginal. Through a series of changes over the years, the Antigua government has accumulated large amounts of land. Today,

the government is the largest single land owner with lands valued at several million dollars.⁵ The distribution of land among various uses is important. For example, the amount of food grown depends on the amount of land allocated to food production, and the scale on which animal husbandry is carried on depends on the acreage of grazing land. The following table shows the acreage of land under different land use in 1961.

TABLE 4-4

THE DISTRIBUTION OF LAND AMONG VARIOUS USES 1961

Land Use Class	Acreage
Crop land	20,045
Grassland:	
Improved	725
Unimproved	4,450
Forest and Woodland	4,697
Non agricultural land	4,172
Total farm land	34,089

Source: An Abstract of Statistics.

The Export Crops

Sugar

Sugar was introduced into the island as early as

⁵Richards, p. 72.

the 1640's. The island ~~was~~ particularly suitable for sugar cultivation because of fertile soil and flatness of fields. The production of sugar was carried on in windmills scattered all over the island on the various estates, each estate being responsible for the processing of its own cane. Today, one can still see the remains of numerous walled towers which testify to the large-scale production of sugar in the past.

A number of circumstances unfavourable to the sugar industry developed in the latter part of the 19th Century. First, the protection which was given to colonial sugar in the British market was gradually removed. This meant stiffer competition with other sugar producing areas. Secondly, the depression of 1870 promoted a feeling of pessimism among producers; and thirdly, competition from beet-sugar struck a further blow to the already weakened sugar industry. Producers in the other islands shifted to other crops, but the Antiguan producers held fast to the production of sugar. Sugar was their only love. "They understood it and did not relish a change."⁶

The Antigua Sugar Factory was built in 1901 by

⁶Ibid, p. 8.

private enterprise but with a substantial grant from the government. Many of the old and inefficient estate mills ceased operation and allowed the more efficient central sugar factory to take over. The Antigua Sugar Factory was bound, by government contract, to process cane supplied by peasants. Four smaller factories continued to operate during the late twenties and into the early thirties. By the end of the thirties, the Antigua Sugar Factory became the only factory producing sugar in the island. In this sense, the Antigua Sugar Factory is in a monopoly position. But its powers are not unlimited because sugar cane growers have the option of turning to other crops if they so desire.

An effort to achieve greater economic efficiency in the production of sugar resulted in the amalgamation of a number of estates in 1943 into the Antigua Syndicate Estates Ltd. This movement brought all the prominent estates under one ownership. The amalgamation had implications for the mobility of the worker. Prior to the amalgamation, a worker who was dissatisfied with working conditions on one estate, could seek a similar job on another. After the amalgamation, this privilege was lost. If a worker were refused employment on one estate, he could not find employment on another because it was to the same management that

he would have to apply. This system affected the worker in another way. His behaviour and work had to be good because a bad name on one estate meant difficulty in obtaining employment on another. The amalgamation also made the work of the trade union easier since, instead of having to deal with the managements of several estates, it had now to deal with one single management.

The production of sugar has been vital to the economy of the island. In the terminology of Rudolf Kool, sugar has been the economic cork on which the island floats. On an average, it accounted for over 18% of the GDP for the years 1953-1959(see Table 4-5).

TABLE 4-5

SUGAR PRODUCTION AND ITS RELATIONSHIP TO GDP 1953-59

Year	Sugar Production (\$000)	GDP (\$000)	Sugar production as % of GDP
1953	3,367	12,085	27.86
1954	1,915	10,702	17.89
1955	2,131	12,376	17.21
1956	3,089	15,950	19.36
1957	2,069	18,085	11.44
1958	3,429	18,028	19.02
1959	3,429	20,943	16.37

Source: C. O'Loughlin, "Problems in the Economic Development of Antigua."

An occurrence in 1958 provides an excellent example of the importance of sugar in the island's economy. During that year, the production of sugar dropped to 19,300 tons from 31,900 in 1957, a decrease of nearly 40% (see Table 4-6). As a result, there was no increase in GDP over 1957, in spite of advances in all other sectors, including an excellent cotton crop. The importance of sugar has declined largely as a result of severe droughts over the past years (see Chart 4-1), the development of other industries, and the growing negative attitude towards field work in general. Fluctuations in sugar production have been outstanding as can be observed from Table 4-6. The quantity of sugar exported from the island in some years, is five times greater than in others.⁷ Of the 34,089 acres of farm land, well over 30% is devoted to the production of sugar. Table 4-7 shows the acreage of cane reaped annually from 1955-1965, and the percentage of the total area of farm land it represents.

Since 1965, there has not been any significant production of sugar and the sugar factory had to be closed down. Efforts are now being made to revive the sugar industry.

⁷Bryan Edwards, pp. 484-85.

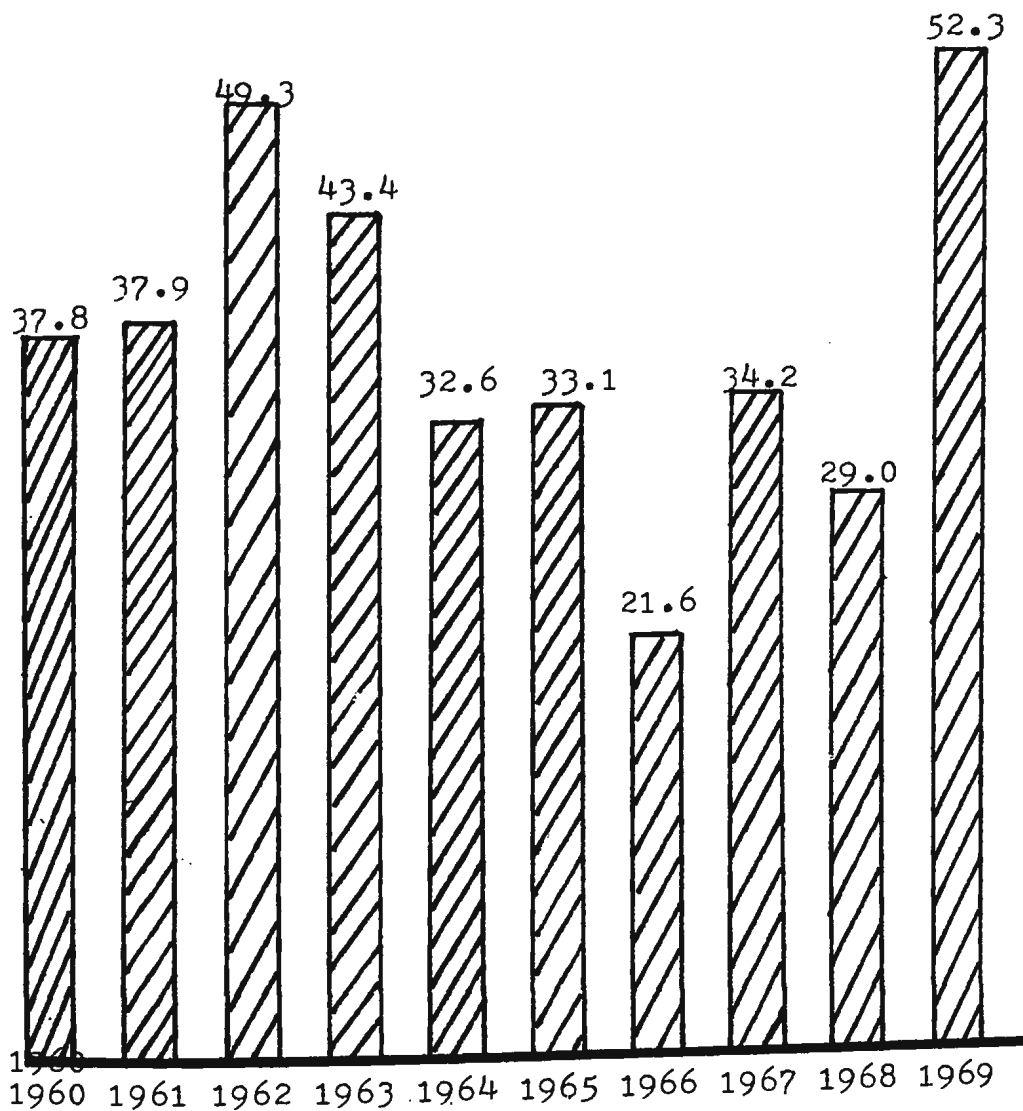
TABLE 4-6

PRODUCTION OF CANE AND SUGAR 1955-1965

Year	(tons)	
	Production of Cane	Production of Sugar
1955	171,000	19,800
1956	268,000	28,700
1957	265,000	31,900
1958	185,000	19,300
1959	278,000	31,800
1960	182,000	20,100
1961	194,000	21,200
1962	195,000	19,300
1963	255,000	28,000
1964	192,000	21,200
1965	134,000	14,100

Source: An Abstract of Statistics.

CHART 4-1

ANNUAL RAINFALL 1960-69
IN INCHES

Source: Department of Agriculture, Antigua.

TABLE 4-7

ACREAGE OF CANE REAPED AS A PERCENTAGE
OF TOTAL FARM LAND

Year	Acreage Reaped	% of total farm land
1955	11,800	34.65
1956	12,800	37.51
1957	12,700	37.21
1958	12,400	36.32
1959	11,900	34.92
1960	11,900	34.92
1961	12,000	35.69
1962	12,200	35.73
1963	12,700	37.21
1964	11,100	32.52
1965	10,500	30.85

Source: An Abstract of Statistics.

Rum and Molasses

Rum and molasses are by-products of sugar and have featured fairly substantially in the island's production. Data on the production of rum and molasses are given in the following table.

TABLE 4-8
PRODUCTION OF RUM AND MOLASSES 1961-65

Year	(Gallons)	
	Rum	Molasses
1961	79,000	549,000
1962	94,000	545,000
1963	85,000	1,290,000
1964	68,000	936,000
1965	66,000	627,000

Source: An Abstract of Statistics.

Cotton

Antigua has been the largest producer of the world famous Sea Island cotton, which accounts for a large proportion of the total exports. For several years, cotton was the second most important crop produced on the island. Like sugar, the production of cotton, and its price, fluctu-

ated from year to year. Since the estates were primarily pre-occupied with the production of sugar, the peasants were responsible for the bulk of cotton produced on the island. Richards has estimated that peasants produce about 80% of the cotton.⁸ The returns from sugar-cane are much greater than the returns from cotton and this fact partly explains the preference of producers for sugar-cane production over cotton production. The acreage of land allotted to cotton production and the quantity of cotton produced from 1955 to 1965 are shown in Table 4-9. As can be seen from the table, 1958 was a good year for cotton. A good price was obtained for the crop, and this helped the economy in general and the peasants in particular. This prosperous cotton crop was considered a blessing as the cane crop in that year was a failure.

Two by-products of cotton are edible oil and meal. The cotton seed is sold to the Central Ginnery and Edible Oil Factory for the production of edible oil and meal. The supply of cotton seed to this factory has not been adequate, and as a result, cotton seed had to be imported from the Grenadines. In 1960, 200 tons of seed were imported from

⁸ Richards, p. 9.

TABLE 4-9

PRODUCTION OF COTTON 1955-65

Year	Production of cotton (000lbs)	Acreage
1955	1,267	5,239
1956	1,248	5,958
1957	526	3,275
1958	1,363	5,111
1959	378	2,772
1960	308	2,149
1961	195	2,162
1962	324	1,655
1963	250	n.a
1964	272	1,132
1965	113	1,126

Source: An Abstract of Statistics.

the Grenadines, and in 1962, over 275 tons were imported from the same source.⁹

Domestic Crops, Animal Husbandry
and Fishing

Statistics for domestic crops are very scant, but these crops nevertheless play an important role in agriculture. Peasants are responsible for practically all of the domestic crops produced in Antigua. It will be observed from Table 4-10 that the relationship of domestic crops to GDP is a fairly stable one. The production of these crops is not subject to such wide fluctuations as are observed in the production of sugar and cotton. During the period 1956-61, domestic crops represented approximately 5.6% of the GDP. It did not rise above 5.9% nor did it fall below 5.3%. The production of corn and arrowroot was expected to increase following the construction of the arrowroot and cornmeal factories. But no significant increase took place in the cultivation of these crops. The variety of food crops is not extensive, nor is it expected to be in an island as small as Antigua. Therefore, a large amount

⁹Annual Report, Industrial Development Board, 1960 and 1962.

TABLE 4-10
DOMESTIC CROPS EXPRESSED AS A PERCENTAGE
OF GDP 1956-1961

Year	Value of Domestic Crops (\$000)	% of GDP
1956	938.1	5.9
1957	1,008.1	5.6
1958	968.6	5.4
1959	1,189.7	5.7
1960	1,200.0	5.6
1961	1,250.0	5.3

Source: O'Loughlin, "Problems in the Economic Development of Antigua."

of foodstuffs has to be imported. The main items of foodstuffs imported will be given greater attention later in this chapter.

The increase in productivity in this area of agriculture in Antigua has been hampered by the method of production, the smallness of the farm unit, and the attitude of farmers towards farming.

Animal husbandry and poultry farming are not done

on any large scale. Animal farming is the province of peasants, though a small amount is done by the estates. A number of families produce eggs for their own personal consumption, and a few of them are able to produce a surplus for sale. The livestock population consists mainly of cattle, sheep, goats, pigs, horses, mules and donkeys. The number of the various types of animals slaughtered from 1960 to 1969 is given in Table 4-11. The numbers exclude illegal slaughters and slaughters for the individual consumption of farmers. Development in this area of agriculture should make a liberal contribution to the economy as it would reduce the import of meat and other animal products. Table 4-12 shows livestock production from 1956 to 1961, and the relationship it bears to GDP.

TABLE 4-12
PRODUCTION OF LIVESTOCK AND RELATIONSHIP TO GDP 1956-61

Year	Production of Livestock (\$000)	% of GDP
1956	840.7	5.3
1957	980.0	5.4
1958	957.0	5.3
1959	1,060.3	5.1
1960	1,100.0	5.2
1961	1,150.0	4.9

Source: O'Loughlin, "Problems in the Economic Development of Antigua."

TABLE 4-11
ANIMALS SLAUGHTERED 1960 - 1969

Year	Oxen	Cows	Calves	Sheep	Goats	Pigs	total
1960	546	374	237	769	572	896	3,393
1961	414	532	434	898	491	1,005	3,748
1962	374	343	182	628	361	586	2,563
1963	469	444	174	1,775	608	781	3,251
1964	650	480	301	1,124	684	784	4,023
1965	413	502	302	1,028	897	1,475	4,615
1966	360	602	345	984	687	1,579	4,567
1967	372	296	211	1,008	667	1,398	3,952
1968	301	331	126	567	516	879	2,720
1969	495	394	58	379	314	723	2,369

Source: Department of Agriculture, Antigua.

The figures in Table 4-12 are only estimates and are therefore not of the highest order of reliability. Sea fishing is the only type of fishing that is feasible in the island as rivers and large ponds are non-existent.

The government has tried to promote a more modern method of fishing by providing credit for outboard engines, but in spite of these efforts, fishing still remains backward. The fishermen use small offshore sailing crafts and even smaller row boats, and many of them regard fishing as a part-time occupation only, to supplement their incomes from farming or from some other jobs which do not occupy all of their working hours. The demand for fish exceeds the supply at the current price, and the price does not go up because of price control on fish. Dried cod fish is being imported from Canada to fill the gap.

The Methods of Production.

Sugar Cane

The method of producing sugar cane has undergone great changes over the years, and these changes have been most marked in production patterns on the estates. Formerly, the ploughing was done by oxen-drawn ploughs. A team of four to six oxen was attached to the plough and about

three or four men drove the team along as they sang a few lines repeatedly. One of the drivers of a team once told me that the singing caused the oxen to work better. He was expressing a common belief among drivers.

Each field is usually banked before it is ready for planting. The cane plants are obtained by cutting up healthy growing canes, usually before they reach maturity, into bits about six to eight inches long. These plants are then covered into shallow holes in the furrows, and set at an angle of about 20° or 30° with the ground, at intervals of about two and one-half feet.

When the plants begin to sprout, the women keep the fields free from weeds by hoeing frequently until the canes have grown to a certain size. Recently, chemicals which destroy weeds have been introduced, and are being used on a fairly extensive scale.

The system of planting and caring outlined above is still in use, but the method of preparing the fields has changed considerably. Presently, the ploughing and banking are done by tractor-drawn ploughs. This method is much faster than the one described above, and the fields are better ploughed as the present ploughs go deeper into

the soil. If fertilizer is used, it is put into containers which the workers carry along, and from which they deposit a stipulated amount at the root of each plant.

The most significant changes have taken place in the method of reaping the crop. Some years ago, a system called 'cut and tie' was used in reaping the crop. The cutters had the responsibility of cutting the canes and tying them in bundles, then the cartmen hand-loaded the carts and transported the canes to locomotive stations, locally called 'lines', in oxen-drawn carts. A cutter's wife usually went with him to tie the canes while he cut them. From the lines, the canes were transported by rail to the sugar factory. Later on, the system of cut and tie was abandoned and the cutter's responsibility is now just to cut the canes.

A later development in the reaping process was the substitution of tractors for oxen. The canes are no longer transported from the fields to the stations in oxen-drawn carts. Instead, they are conveyed in trailers drawn by tractors. Recently, hand loaders have been displaced by mechanical loaders, and this, along with the use of tractors, is the most progressive change that has taken place in the method of sugar-cane production. I should mention



also that operations at the locomotive stations have changed. The canes were formerly packed by hand on open carts called 'trucks'. This method resulted in much loss of cane from the stations to the factory. Now, the cane is transferred by cranes from the trailers to closed carts called bagoons.

All that has been said so far with respect to the method of cane production and handling applies to production on the estates. Peasant production takes a different form. The preparation of the land is still largely done by using a fork, and some peasants even plant the cane without forking the land. This practice, however, is becoming less prevalent as an increasing number of peasants can now get their lands ploughed with tractors. The cutting of canes follows the pattern outlined above for estates, but the loading is still done mainly by hand. The peasants used to transport their canes to the stations by donkeys, and a few who could afford it, used horse-drawn carts. Peasants now transport their canes by tractors.

Cotton

The dichotomy that exists between estate production and peasant production of cane does not exist to the same extent in the case of cotton production. The cotton planters

use a hoe and put about five cotton seeds in each hole, placed at about the same intervals as the cane plants. But the cotton seeds are planted on the banks and not in the furrows as in the case of the cane plants. The cleaning and bagging are all done by hand, and so is most of the picking. A cotton-picking machine is now being used on a few estates. At first, the idea came under heavy attack on the grounds that the cotton picked by the mechanical harvester was much too dirty. But the machine has continued to operate and it is now generally conceded that it is not doing such a bad job after all.

Food Crops

The methods of production in this area are the most primitive and unscientific. There is no farm on which food crops are grown on a large scale, and the whole process of production is manual. The decision to plant is made by consulting a farmers' manual called "McDonald's almanac." This manual is the farmers' bible to which they adhere with a sort of religious devotion. It tells what days in each month are good for planting 'above ground crops and root crops. One lady told me that she once misinterpreted the manual and the crop she produced was one of the best

she ever had. This however, did not prevent her from continuing to plant 'by the book.'

Fishing

Fishing is done mainly off-shore. The fishermen use fish pots made of mesh wire or some wooden material (mainly bamboo). These pots are made in such a way that once the fish enter into them, it is very difficult for them to get out. The pots are baited with sea moss or some other special kinds of bush and then set out in the fishing area. The more skillful fishermen cover their pots with rocks and coral in order to attract the fish. Generally, about two days are allowed to pass before the pots are drawn. Each craft is manned by about two to six fishermen depending on the size of the particular boat. They are not equipped with cold storage facilities, and on many occasions, a large part of the catch is spoilt before the fishermen can manage to get back to land. Storms are frequent in the area, and many pots are often lost following a stormy weather.

A small amount of fishing is done with nets. The catch from nets is usually greater than the catch from pots, but this method is expensive as the nets are generally damaged, sometimes rather severely, after each maneuver, and repairs are costly and time consuming. An even smaller

amount of fishing is done by using lines, but this is considered more a sport than an occupational pursuit, and the catch in this case is rarely sold.

Irrigation

Irrigation has not been practised to any significant degree in the past. The reason for this is not at all apparent as it has been long established that irrigation could do much to revive agriculture. In 1961 - 62, an experiment with the irrigation of ten acres of vegetable land indicated that with irrigation, food crops could give encouraging results. Furthermore, in 1963-64, an investigation into the conservation of water in the island was carried out. The report emphasized that "marginal average rainfalls and persistence of drought conditions imply a very exacting environment for the growing, without irrigation, of sugar and indeed of several other cash crops." Within the past three years, a number of dams have been constructed with the aim of improving agriculture, and it is expected that this irrigation scheme will help to put sugar cane production on its feet again.

The Peasant Development Organization

No study of agricultural development in Antigua

could be complete without reference to the Peasant Development Organization (PDO). It has been shown that the peasants produce about 40% of the sugar cane, about 80% of the cotton, and virtually all of the ground provisions. They therefore play an important role in the island's agriculture, and their organization is therefore vital to agricultural development. I shall attempt to trace the development of this organization from its inception to its present stage.

The first meaningful attempt to form a small farmers' organization resulted from the peasants' dissatisfaction with the price they received for canes supplied to the factory. The factory paid the estates a better price than it paid the peasants, and justified its action on the grounds that the estates contracted to supply cane while the peasants made no such contract. This argument was rather unsound as the peasants had to market their cane through the estates, and the estates dictated that the peasants should plant cane. The peasants had no choice but to conform to this demand since they rented the lands from the estates. In the early 1900's, a few small farmers and other persons who were interested in the peasants formed an organization which they named the Antigua Agricultural Association. The main purpose of this organization was to supply cane

to the factory on a contractual basis. In order to obtain the price paid to contractors, the organization had to supply a minimum of one hundred tons of cane annually.¹⁰ Dissension soon arose among the leaders of the organization and the president resigned. Other presidents held the post for short periods and then the organization discontinued its operation.

The small farmers had difficulty in ploughing their lands and getting their cane hauled. Sometimes the cane remained on the plot for such a long time that much loss of weight resulted. At the suggestion of the Antigua Trades and Labour Union, the government established a Small Farmers Ploughing and Haulage Board with the responsibility of ploughing the peasants' lands and hauling their canes.

The Small Farmers Ploughing and Haulage Board eventually gave way to the Peasant Development Organization in 1954, and a Peasant Development Officer was appointed under the supervision of the Director of Agriculture. The development of this organization has placed the peasants in a secure position. Provision is made in the government's budget

¹⁰Richards, p. 9.

for a certain sum to be used as loans to the peasants. A sum of \$400,000 was provided annually in 1961 and 1962. This was increased to \$450,000 in 1963 and 1964.¹¹ By 1967, it amounted to \$500,000.¹²

2. FOREIGN TRADE

Antigua has engaged in foreign trade for over three hundred years. Since sugar plantations were established in the island by British land owners, a trading relationship developed between Antigua and the United Kingdom. No goods above the subsistence level were produced, and in order to maintain the standard of living to which they were accustomed at home, the European settlers found it necessary to import virtually all the goods they needed. In the words of J. V. Levin, the island became a luxury importer.¹³ Most of the wealthy estate owners were from Britain, thus virtually all the imports were from that country.

¹¹Antigua Report, 1961-64.

¹²Richards, p. 68.

¹³Jonathan V. Levin, "The Export Economies," in Economics of Trade and Development, ed. James D. Theberge, (New York: John Wiley and Sons, Inc., 1968), p. 20.

It can be said with a great degree of justification that to supply Britain with sugar and cotton was the *raison d'etre* of the island, and from the time of settlement, the island has not ceased to be an economy specializing in agricultural exports. Of course, the smallness of the island dictates that it must be a specialized economy.

The dependence on foreign trade unfortunately places the island at the mercy of circumstances outside its own border. But what is even more unfortunate is **the** fact that the exports consist of only very few items. Another danger of this type of trade is that it may lead to the perpetuation of the dependence on agriculture, and thus retard the development process.

The Composition of Foreign Trade

Throughout the history of the island, there have not been many significant changes in the pattern of foreign trade so far as the commodities are concerned. The most important changes have occurred as a result of the development of the tourist industry, the construction of the oil refinery and the formation of a free trade area which will be briefly discussed later in the chapter.

Exports

The main export commodities up to 1965 were sugar and cotton. The export of sugar alone accounted for over 80% of total domestic exports. After 1965, the trade in sugar declined and there has been no export of that commodity since. The export of cotton jumped from about 5% of total domestic exports in 1964 and 1965 to over 60% in 1966 to dominate the export trade. This is due to the fact that total exports fell to a very low level in that year. There was no export of sugar, and there was no export commodity to fill the gap. In 1967 however, mineral fuels and lubricants became Antigua's main export, accounting for over 84% of total domestic exports. Molasses, crustacea, and rum are also important items of export. Since 1964, the export of wine has also become important (see Table 4-13). The value of exports by the Standard International Trade Classification (S.I.T.C.) section from 1960 to 1967 is shown in Table 4-14. It will be observed that the export commodities have remained primary in nature. The relationship of domestic exports to GDP has varied over the years, sometimes rising as high as 39% and falling as low as 14%. But even at its lowest level, the export sector is still a very large sector of the economy. Table 4-15 shows the relationship of domestic exports to GDP from 1955 to 1964.

TABLE 4-13.

PRINCIPAL ITEMS OF DOMESTIC EXPORTS AND THEIR RELATIONSHIP
TO TOTAL DOMESTIC EXPORTS 1963 - 1967

	1963		1964		1965		1966		1967	
	Amt.	%	Amt.	%	Amt.	%	Amt.	%	Amt.	%
Commodities	(\$)		(\$)		(\$)		(\$)		(\$)	
Mineral fuels and lubricants	-	-	-	-	-	-	-	-	1,665,076	84.9
Sugar (unrefined)	5,797,711	82.3	3,155,565	85.8	2,200,053	89.1	-	-	-	-
Cotton, cleaned lint	233,362	3.5	206,552	5.6	131,384	5.0	293,476	60.4	6,013	0.4
Molasses	109,749	1.7	233,188	6.3	46,571	1.9	46,603	9.6	-	-
Crustacea	79,546	1.2	41,498	1.1	42,501	1.7	61,590	12.7	74,010	4.7
Cotton-seed meal	800	0.0	800	0.0	-	-	2,900	0.6	-	-
Rum	11,510	0.2	10,501	0.3	6,997	0.3	5,627	1.2	1,250	0.1
Wine	-	-	18,057	0.5	29,999	1.2	29,399	6.1	33,272	2.1

Source: Antigua Annual Trade Report for the year 1967.

TABLE 4-14
VALUE OF EXPORTS BY S.I.T.C. SECTION 1960-67

S.I.T.C. Item No.	Class or description	1960	1961	1962	
Section 0	Food	3,321,156	3,692,531	3,984,861	6,02
Section 1	Beverage and Tobacco	4,440	6,029	7,999	1
Section 2	Crude materials, inedible except fuels	343,553	194,853	322,710	25
Section 3	Mineral fuels, lubricants and related materials	18,369	17,753	31,533	2
Section 4	Animal and vegetable oils and fats	135	2,830	200	
Section 5	Chemicals	6,779	3,085	4,397	
Section 6	Manufactured goods, classified chiefly materials	213,406	222,783	310,857	25
Section 7	Machinery and transport equipment	217,901	248,088	348,574	27
Section 8	Miscellaneous manufactured articles	33,283	41,931	52,906	4
Section 9	Miscellaneous transactions and commodities	113,602	121,212	215,526	22
	Total	4,272,624	4,552,095	5,279,563	7,14

Source: Antigua Trade Report, 1967.

60-67

(\$)

1962	1963	1964	1965	1966	1967
3,984,861	6,028,317	3,450,693	2,310,239	133,748	120,874
7,999	18,401	37,703	39,703	85,549	45,416
322,710	254,323	229,583	139,600	307,648	16,385
31,533	21,864	27,150	43,563	84,373	1,755,062
200	5,465	-	528	20	-
4,397	3,613	6,947	25,063	34,495	47,648
310,857	254,953	315,896	319,851	357,522	512,958
348,574	276,909	209,783	2,738,655	877,690	1,883,082
52,906	47,889	193,865	87,725	88,152	270,430
215,526	229,049	190,841	635,356	400,513	316,744
5,279,563	7,140,791	4,661,989	6,340,337	2,369,710	4,968,599

TABLE 4-15

RELATIONSHIP OF DOMESTIC EXPORTS
TO GDP FROM 1955 TO 1964

Year	Domestic Exports (\$mn)	GDP(\$mn)	Domestic Exports as % of GDP
1955	4.9	12.4	39.5
1956	6.2	15.9	39.0
1957	6.9	18.1	38.1
1958	5.4	18.0	30.0
1959	4.8	20.9	22.9
1960	3.7	21.3	17.4
1961	3.8	22.0	17.3
1962	4.3	22.5	19.1
1963	6.2	24.8	25.0
1964	3.6	25.1	14.3

Sources: 1. An Abstract of Statistics.
2. Antigua Trade Report, 1967.

Imports

Despite the fact that Antigua is an agricultural Country, it is highly dependent on imported food. "Only about 20% of the food used in value terms is actually home produced and this includes milk, eggs, fish and a very small part of the meat and vegetables consumed."¹⁴ It must be borne in mind that a large proportion of the food that is imported, cannot be grown in Antigua because of geographical conditions. The major items of import are food, beverage and tobacco which account for 21.2% of total imports; manufactured goods which account for 16%; machinery and transport equipment accounting for 23%; and mineral fuels and lubricants accounting for 16% of total imports. Table 4-16 shows the principal items of import and their relationship to total imports for the years 1963-1967, and Table 4-17 shows the value of imports by SITC section from 1962 to 1967. The importance of finished industrial goods in the import items is an indication of the relatively low level of industrial activity. The import of motor vehicles and parts has increased steadily over the years and may be taken as a sign

¹⁴C. O'Loughlin, Economic and Political Change in the Leeward and Windward Islands, p. 134.

TABLE 4-16

MAIN ITEMS OF IMPORT AND THEIR RELATIONSHIP TO
TOTAL IMPORTS FOR 1963-1967

Items	1963		1964		1965		1966		1967	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Road motor vehicles and parts	1,409,974	6.1	1,410,807	6.1	2,039,516	6.3	2,372,781	5.4	2,730,734	7.0
Apparel	775,366	3.4	680,465	3.0	646,230	1.9	927,088	2.1	747,342	1.9
Medical and Pharmaceutical products	390,132	1.7	357,214	1.5	320,238	1.0	479,173	1.1	533,114	1.3
Butter and butter substitutes....	282,405	1.2	309,066	1.3	434,015	1.3	404,645	0.9	336,206	0.8
Alcoholic beverages	544,601	2.4	625,345	2.7	558,679	1.7	1,015,892	2.3	1,147,009	2.9
Footwear	458,212	2.0	393,124	1.7	357,205	1.1	434,164	1.0	632,798	1.6
Cement	406,883	1.8	345,471	1.5	354,999	1.1	556,770	1.3	269,694	0.7
Cotton Piece goods	297,976	1.3	262,085	1.1	280,677	0.9	325,015	0.1	352,763	0.9
Fish of all kinds	497,854	2.2	591,525	2.6	543,242	1.7	632,231	1.4	592,876	1.5
Wheaten flour ...	767,603	3.4	756,673	3.3	805,698	2.8	726,861	1.7	558,307	1.4
Rice	381,152	1.7	487,753	2.1	525,600	1.6	374,434	0.8	303,532	0.8
Meat and meat preparations ..	1,074,090	4.7	1,146,060	5.0	1,005,474	3.1	1,502,997	3.4	1,472,876	3.7
Mineral fuels & lubricants.....	2,523,185	11	1,525,155	6.6	2,092,036	6.5	6,746,406	15	6,257,568	16
Wood and lumber	749,858	3.3	861,889	3.7	54,462	1.7	838,046	1.9	957,520	2.4

Source: Antigua Trade Report, 1967.

TABLE 4-17

ANALYSIS OF IMPORTS BY S.I.T.C. SECTION 1962-1967

S.I.T.C. Item No.	Class or classification of Goods	1962	1963	1
Section 0	Food	5,657,055	5,606,626	6,2
Section 1	Beverages and tobacco	547,000	745,760	8
Section 2	Crude materials, inedible except fuels	785,675	802,870	9
Section 3	Mineral fuels, lubricants and related materials	1,656,473	2,614,956	1,5
Section 4	Animal and vegetable oils & Fats	300,786	275,168	2
Section 5	Chemicals	1,540,615	1,571,271	1,6
Section 6	Manufactured goods, classified chiefly material	4,389,843	4,314,801	4,1
Section 7	Machinery and transport equipment	3,744,998	3,952,670	4,9
Section 8	Miscellaneous manufactured articles	2,713,878	2,877,976	2,1
Section 9	Miscellaneous transactions and commodities	298,068	242,543	31
	Total	21,633,791	23,004,641	23,05

Source: Antigua Trade Report, 1967.

T.C. SECTION 1962-1967

(\$)

ds	1962	1963	1964	1965	1966	1967
	5,657,055	5,606,626	6,265,697	6,550,634	7,406,361	6,872,453
	547,000	745,760	826,517	908,149	1,448,507	1,417,391
	785,675	802,870	918,286	620,506	914,884	1,011,131
	1,656,473	2,614,956	1,595,777	2,200,690	7,941,087	6,257,648
ts	300,786	275,168	252,373	308,482	324,792	305,212
	1,540,615	1,571,271	1,629,198	1,592,850	2,045,727	3,303,657
	4,389,843	4,314,801	4,137,460	6,830,239	9,252,926	6,539,727
	3,744,998	3,952,670	4,976,296	9,790,105	9,268,574	8,994,919
	2,713,878	2,877,976	2,136,403	3,323,487	4,448,047	3,756,813
	298,068	242,543	316,105	295,869	863,053	635,239
	21,633,791	23,004,641	23,054,112	32,421,011	43,913,958	39,094,190

of increased prosperity. The rapid increase in the import of mineral fuels and lubricants since 1966 is due largely to the import of crude oil by the refinery.

Total Trade

There is only one year between 1948 and 1967 in which exports exceeded imports. A negative balance of visible trade has persisted throughout the entire period. In fact, the gap has widened continuously from 1956 to 1966 as can be seen from Table 4-18. One possible explanation of the sharp increase in the difference from \$18 million in 1964 to \$26 million in 1965, and the even greater increase to \$41 million in 1966 is the decline in the export of sugar. There was no export of sugar in 1967 either, but the export of mineral fuels and lubricants in that year helped to reduce the gap substantially. As has been shown, the goods exported are mainly primary products, and the goods imported are largely manufactured goods. Taking 1876-80 as a base, Raul Prebisch has affirmed that between 1946-47 only 68.7% of finished products could be obtained for a given quantity of primary commodities.¹⁵ It is a well-known

¹⁵Raul Prebisch, "Centre and Periphery" in Leading Issues in Development Economics, ed. Gerald M. Meier, (New York: Oxford University Press, Inc., 1964), p. 341.

TABLE 4-18
TOTAL TRADE FOR THE YEARS 1938, 1948-67

Period	Imports	EX Exports			Balance of Visible Trade
		Total	Domestic	Re-exports	
1938	1,217,611	971,180	961,714	9,466	- 246,431
1948	4,272,727	1,684,168	1,677,866	6,302	- 2,588,599
1949	4,715,633	2,884,402	2,869,916	14,486	- 1,831,231
1950	6,230,531	5,358,825	5,328,784	30,041	- 871,706
1951	5,117,483	2,918,408	2,886,375	32,033	- 2,199,075
1952	5,254,903	6,571,808	6,523,711	48,097	+ 1,316,905
1953	7,860,143	6,388,577	6,311,733	76,844	- 1,471,566
1954	7,409,845	2,734,851	2,598,343	136,508	- 4,674,994
1955	10,341,205	5,512,842	4,921,723	591,119	- 4,828,363
1956	10,371,423	6,279,101	6,193,022	86,079	- 4,092,322
1957	11,438,663	7,183,601	6,983,250	200,351	- 4,255,062
1958	13,436,961	5,701,013	5,415,773	285,240	- 7,635,948
1959	14,047,834	5,197,239	4,818,485	378,754	- 8,850,595
1960	15,626,966	4,272,624	3,755,521	517,103	- 11,354,342
1961	19,525,703	4,552,095	3,882,082	670,013	- 14,973,608
1962	21,633,791	5,279,563	4,343,237	936,326	- 16,354,228
1963	23,004,641	7,140,791	6,278,280	862,511	- 15,863,850
1964	23,054,112	4,661,989	3,677,114	984,875	- 18,392,123
1965	32,421,011	6,340,337	2,467,876	3,872,461	- 26,080,674
1966	43,913,958	2,369,710	485,726	1,883,984	- 41,544,248
1967	39,094,190	4,968,599	1,949,191	3,019,408	- 34,125,591

Source: Antigua Trade Report, 1967.

fact that over the past decades, the prices of primary products have not risen as fast as the prices of manufactured goods. This has caused a decline in the island's terms of trade.

The Direction of Trade.

The United Kingdom and the United States have been the chief countries from which Antigua obtains its imports. In 1964 and again in 1967, the United States replaced the United Kingdom as the largest single supplier of the country's imports. Canada and Trinidad have occupied third place in different years. A percentage distribution of imports from the principal supplying countries is given in Table 4-19. The United Kingdom has declined from the principal receiving country in 1963 with 80.3% of the island's exports, to third place in 1967, receiving 5.4% of the total exports. On the other hand, exports to Canada have risen to over 20% of the island's total in 1967. Table 4-20 shows the percentage distribution of exports to the principal receiving countries during 1963-1967.

The direction of trade has shifted over the years. Because of political arrangements, rather than purely economic circumstances, the United Kingdom has always been the

TABLE 4-19

PERCENTAGE DISTRIBUTION OF IMPORTS FROM
THE PRINCIPAL SUPPLYING COUNTRIES 1963-67

Country	(%)				
	1963	1964	1965	1966	1967
United Kingdom	27.5	26.2	36.7	30.6	22.7
Trinidad	14.9	10.5	9.5	11.9	9.6
Guiana	2.3	2.8	2.1	1.1	1.3
Canada	11.6	12.5	11.4	8.0	9.3
U.S.A.	22.6	27.7	22.6	23.0	29.5
Holland	3.7	3.9	3.1	3.1	2.7
All other	17.4	16.4	14.6	22.3	24.9

Source: Antigua Trade Report, 1967

TABLE 4-20
PERCENTAGE DISTRIBUTION OF EXPORTS TO THE
PRINCIPAL RECEIVING COUNTRIES 1963-1967

Country	(%)				
	1963	1964	1965	1966	1967
United Kingdom	80.3	74.0	37.8	17.6	5.4
Canada	6.5	0.5	4.3	1.8	20.9
Trinidad	3.8	8.9	13.6	27.4	2.8
U.S.A.	1.6	6.2	7.9	11.7	9.1
Puerto Rico	2.2	2.0	26.5	8.4	5.0
Barbados	1.3	2.6	2.1	5.8	3.4
All other	4.3	5.8	7.8	27.3	53.4

Source: Antigua Trade Report, 1967

island's principal supplying and receiving country. Now the direction is obviously towards the North American market. Trade with the other West Indian islands has increased over the years. This may be explained partly in terms of changes which have taken place within the West Indian islands themselves. There is a natural tendency for newly introduced manufacturing industries to supply the regional market available in other nearby West Indian islands. Trade between Antigua and Trinidad is particularly active, but the operation of the oil refinery in Antigua is likely to reduce the volume of import from Trinidad. Table 4-21 shows the value of imports from and exports to each territory of the British Caribbean Area during 1965-67. The establishment of a regular shipping service between all the islands has greatly enhanced the volume of inter-island trade.

In April 1968, the governments of Antigua, Barbados, Guiana and Trinidad and Tobago signed an agreement to form a Free Trade Association of the islands mentioned above. The main objective of this association, called the Caribbean Free Trade Association (CARIFTA), is to promote the expansion and diversification of trade in the area.¹⁶

¹⁶Caribbean Free Trade Association Agreement, (Trinidad: Government Printery, 1968), p. 2.

TABLE 4-21
TRADE BETWEEN BRITISH CARIBBEAN AREA 1965-67
(\$)

Country	Imports			Exports		
	1965	1966	1967	1965	1966	1967
Barbados	558,452	581,306	613,731	131,744	136,784	173,712
Bahamas	5,062	9,482	23,674	2,951	835	1,992
Br. Honduras	305,699	504,798	417,561	-	6,500	573,141
Br. V.I.	1,269	2,872	174	113,372	32,640	65,508
Dominica	67,067	120,565	115,036	41,468	41,226	84,524
Grenada and Grenadines	6,765	8,064	9,679	12,231	60,797	25,429
Guiana	671,168	477,098	503,202	9,502	5,094	31,271
Jamaica	392,274	566,340	459,242	13,321	16,262	47,876
Montserrat	3,769	10,734	16,933	92,431	115,318	125,117
St. Kitts, Nevis, Anguilla	34,321	41,442	67,060	110,735	125,551	216,118
St. Lucia	8,182	3,871	6,857	31,993	39,815	19,715
St. Vincent	10,029	59,842	36,322	23,078	26,367	17,315
Trinidad	3,095,238	5,253,384	3,763,161	859,800	649,877	141,020
All Territories	5,159,295	7,639,798	6,032,632	1,442,626	1,257,066	1,522,738

Source: Antigua Trade Report, 1967.

This recent development has undoubtedly encouraged and increased trade between the islands, and it is expected to have some impact on industrial activity within the area. One certain advantage of CARIFTA is the larger 'local' market which it has made possible. Certain industries, which were formerly unprofitable because of the small size of the market, can now be successfully introduced in the region.

CHAPTER V

INDUSTRIALIZATION

Industrialization tends to favour economic development. The smallness of the island does not permit heavy industries, but this fact does not preclude industrialization altogether. The Antigua government has recognized the need to diversify the economy and it is making an effort to encourage the growth of industries in the island. The number of new industries that has developed in the island within the past few years is certainly encouraging. Not only has the government encouraged new industries, but it has undertaken the operation of a few industries itself. The body through which the government operates in this area is the Industrial Development Board. Up to date, the Industrial Development Board has three factories in operation. These comprise a Central Cotton Ginnery, an edible oil factory, and a cornmeal factory. The Industrial Development Board also established a pottery which has been turned over to private enterprise, and an arrowroot factory which has ceased to operate.

All other industries established in the island are operated by private enterprise. These include a cement

factory; a factory for the distilling and bottling of whiskey, gin and vodka; a furniture factory; and a factory for the manufacturing of industrial and medical gases. This factory manufactures oxygen, nitrogen and acetylene and also stocks most industrial gases such as carbon dioxide, nitrous oxide, refrigerant gases, and moisture-free breathing air. Also, there is a factory which produces reconstituted milk, ice-cream and other dairy products. This plant is capable of pasteurising and homogenising one hundred gallons of dairy products per hour. It employs a staff of seventeen local persons.¹ Antigua Blocks, Ltd., produces blocks for construction purposes and employs about fifty persons. There is also a cigarette factory and a garment factory.

All these industries have made significant contributions to the economic development of the island. But the biggest single investment ever to be made in the industrial sector of the economy is the construction of an oil refinery by the West Indies Oil Company in 1967. The refinery occupies a 300 acre site made available by the government. The initial capital investment of this project exceeds \$40 million. During the construction period alone, about nine hundred new jobs were created, and the company has trained a number of

¹Antigua Independence, 1967

workers in skilled tasks. The West Indies Oil Company now operates a chain of service stations over the island and employs over two hundred workers. In addition, the company supplies fuel to many of the aircrafts which land at the island's airport. A Cost-Benefit analysis of this project would be most interesting, but the relevant data are not presently available.

The growth of industries has absorbed many of the workers who have no taste for agriculture, and as industries develop, a smaller proportion of the labour force will be employed in agriculture, and a larger share of the GDP originates in the industrial sector.(see Chart 5-1). The manufacturing sector has increased much since 1964 and this has helped to keep the economy growing despite the sugar dilemma.

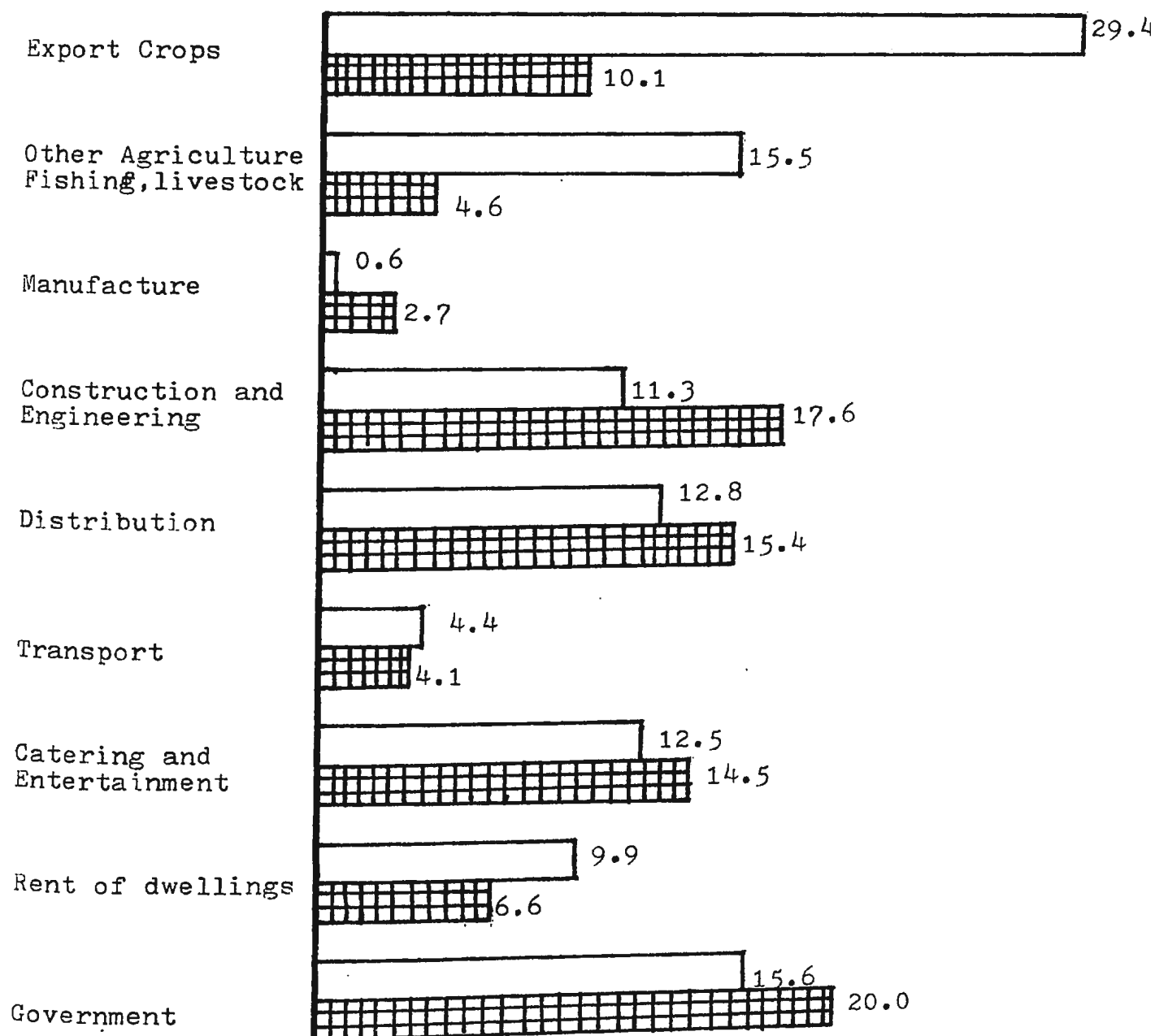
A Model for the Development of the Agricultural and Industrial Sectors.

The development of the agricultural sector depends on the expansion of the industrial sector. Included in the agricultural sector are crop cultivation, fishing, and animal husbandry. If development is to be achieved, the agricultural sector must expand. Expansion in this sense does not mean putting more people into agriculture. This would

CHART 5-1
A PROPORTIONAL DISTRIBUTION OF GDP
AMONG SELECTED INDUSTRIES 1953 And 1954

1953

1964



Source: Table 4-1

only aggravate an already bad situation. It means increasing the productivity in agriculture. The entire method of farming needs to be reformed, and more up-to-date techniques should be employed.

Those in the fishing industry should be informed of modern gear and techniques and be encouraged to use them. Larger fishing vessels should be encouraged and these should be equipped with cold storage facilities. Farmers should be informed of new farming equipment and techniques. Instructors from the Department of Agriculture should visit the farmers and help them to use methods which will increase their crop yield. These improvements would require more funds than the average fisherman or farmer could provide without borrowing, and it is often very difficult for these people to obtain loans from the commercial banks. For this reason, an agricultural bank should be set up by the Peasant Development Organization so that farmers can obtain loans on easy terms. These improvements demand that the number of people in the agricultural sector be reduced, but unemployment would not result because the model provides for the absorption of these workers in the expanding industrial sector.

Although all industries are inter-related in a sense,

there is a closer relationship between some industries than there is between others. The trick here is to select those industries which are most closely related. They should be industries on which Antiguan spend a good deal of their incomes, and which do not require very complicated and sophisticated methods of production. The latter is a necessary constraint governed by the fact that the labour force will not be sufficiently skilled to undertake industries other than those which require few skills. This is particularly applicable to those who will be moving from agriculture into the manufacturing industries. Of course, it can be argued that retraining can remove this constraint. But training takes time, and we are interested in development now, so something has to be done in the mean time. The following table contains a list of some products which are imported in large quantities and which could be produced locally. In addition, soap and sweets could be successfully produced. As the number of industries increases, an enterprising and progressive spirit is likely to develop also. Antiguan would become more 'machine-minded' and at the same time, the retraining process referred to above should be ready to supply some skilled labour to the expanding industrial sector. By this time, heavier industries such as bicycle manufacturing, should be economically feasi-

TABLE 5-1
IMPORTED PRODUCTS FOR WHICH LOCAL INDUS-
TRIES MIGHT BE SUBSTITUTED 1964

Articles	Unit	Quantity	Value(\$)	Chief country of origin
Apparel	-	-	646,868	U.S.A.
Boots and shoes	doz.prs.	11,857	372,587	Britain
Butter and butter substitutes	lbs	493,573	309,066	Australia
Cotton piece goods	sq.yds.	501,647	251,224	U.S.A.
Fish,all kinds	lbs	1,419,780	649,393	Canada
Meat,all kinds	lbs	1,910,896	1,092,167	U.S.A.

Source: Antigua Report, 1964.

ble. The highly industrialized countries are concentrating on very heavy manufacturing industries, so Antigua could export its light manufactured products, not only to the neighbouring islands, but also to the highly industrialized countries.

The Industrial Development Board could call a meeting of businessmen, and draw up some sort of agreement whereby industries are started for the production of these commodities. If Antiguan businessmen are unwilling to start

the industries, then the government should take the initiative and introduce some industries on its own.

The government could also encourage foreign investors to come in and set up industries. Much has been said against foreign investment in Antigua. I think that more consideration ought to be given to the nature of the industries, rather than condemning foreign ownership altogether. If the nature of the industries is such that not much processing takes place in the island, then there might be grounds for objection. But if the industries are such that Antiguan are employed in producing goods on which Antiguan spend their incomes, then I can conceive of no valid reason why foreigners should not be encouraged to come in and establish industries. It must be granted that if foreign investors establish industries in Antigua, a good portion of the profits may not stay in the island. But if Antiguan are not prepared to undertake industries, then foreigners should be allowed to do so. I think this beats importing goods, and in my opinion, it is much better to have industries owned by foreigners than no industries at all. An alternative would be a joint venture by the government and the foreign concern. This guarantees that at least a part of the profit remains in the island, and this arrangement might probably be less distasteful to Antiguan.

The machine-minded spirit that would develop as a result of the growth of industries would not be limited to the industrial sector, but would spread throughout the economy. This implies that the modern equipment and techniques necessary to the improvement of the agricultural sector should follow as a result of industrialization. The question may now be raised that if industrialization should effect the necessary modernization of the agricultural sector, why worry at all about agriculture? The answer is that industrialization will affect the agricultural sector eventually, but its effect may be slow, and if the objective is rapid development, then the measures outlined will certainly quicken the pace.

Industrialization must proceed rapidly to cope with the number of people leaving the agricultural sector and those who are already unemployed.

The above system implies that there must be an efficient planning unit to formulate development plans. The plans formulated by the unit should be sufficiently flexible so that adjustments to changing conditions may not be too difficult, and they should be frequently revised.

The system outlined above involves a two-way relationship between the agricultural sector and the industrial

sector. I argue in favour of a good number of industries initially rather than one or two industries at a time, because as Rosenstein-Rodan suggested, "launching a country into self sustained growth is a little like getting an air-plane off the ground. There is a critical ground speed which must be passed before the craft can become air-borne."²

One or two industries will not provide the necessary momentum for self sustained growth. There must be a reasonable number of industries. As the industrial sector expands, the agricultural sector contracts in the sense that a smaller proportion of the economically active population will be employed in that sector. Both sectors develop side by side, helping each other towards the development of the whole economy.

Financing Development

Domestic Sources

There are three main domestic sources that can be tapped for the capital needed for development purposes in Antigua. First, capital formation can result from a reduction in consumption. Secondly, the government may tax away a part of consumers' income, and thirdly, under-employed

²P. Rosenstein-Rodan, "The Theory of the Big Push" Leading Issues in Development Economics, p. 434.

labour can be transferred from less productive to more productive work.

Voluntary Saving

Real income in Antigua is so low that only a small fraction of it can be saved. But as development proceeds, income increases and savings should also increase. Economic development therefore makes an increase in savings possible. But even with incomes as low as they are, the saving potential is considerably greater than is often realized. A significant number of people still retain the traditional habit of saving by hoarding. A large number of people (notably women) still believe that the best and safest way of saving is to keep as many fifty-cent pieces as possible in tins, and probably even a larger number of people hold on to American notes as they do precious jewels. The number of people who behave in this manner is decreasing as time progresses, but the number is still sufficiently large to affect the amount of savings that could be used for investment. This attitude is due largely to two factors: ignorance and insufficient incentives to renounce these backward saving habits. There are sufficient commercial banks in Antigua but people are not sufficiently aware of the functions of the banks. These primitive saving

habits can be broken by persuading people to deposit their savings in banks. This can be done by advertising on radio and T.V. People need to know that they can earn interest by depositing their money in banks, and they need to be assured of the safety of their money while it is deposited in the banks. Once people begin to abandon the old-fashioned methods of saving, the volume of money in circulation will increase, and investors will be able to obtain more money for investment purposes.

Taxation

In Antigua, the need for the government to involve itself in the economy is great. This great involvement is justified on two accounts. First, there is a shortage of entrepreneurs to exploit all the potential investment opportunities which would foster economic development, and secondly, private enterprise is myopic in that businessmen are interested in short-run maximization. They are not likely to be interested in projects which do not yield immediate profits. But these are the very projects which may yield social benefits in the long-run, so the government should invest in these projects. An important type of investment which falls within this category is 'social overhead investment'. The special feature of this type of investment is the generation of external economies.

The most effective way of raising funds for developing the economy is by taxation. No government likes to increase taxes. It has often been said, and probably with some measure of justification, that the most unpopular government is one which increases taxes. To determine whether or not the government has gone as far as it can go in increasing taxes on income without at the same time imposing unbearable hardships on the tax payers would require an investigation of the tax structure. There have been several charges that the level of taxation is already too high. Taxes at various levels of income are shown in Table 5-2. A sum of \$700 goes tax free for an unmarried individual with no dependents. The remaining portion of the income is taxed as shown in the table. Many of the people who charge that the present level of taxation is too high defend their position by pointing to the poor services they get in return. They feel that tax revenues are not properly utilized in providing them with the services they need. If they could see some advantages in the form of better roads, decent water supply, better schools for their children, better health facilities, and in general, a greater improvement in public utilities, they would be more willing to yield to increases in taxes. A small increase in taxes then is possible without much resentment provided that tax payers see some benefits in return.

TABLE 5-2
INCOME TAX AT VARIOUS LEVELS OF INCOME PER MONTH

(\$)									
Salary	Tax	Salary	Tax	Salary	Tax	Salary	Tax	Salary	Tax
100	0.79	200	6.05	300	16.50	400	33.34	500	57.00
110	1.03	210	6.92	310	17.92	410	35.50	510	59.50
120	1.48	220	7.84	320	19.25	420	37.00	520	62.00
130	1.93	230	8.75	330	20.60	430	39.50	530	64.50
140	2.38	240	9.63	340	22.25	440	41.47	540	67.00
150	2.83	250	10.67	350	24.00	450	44.50	550	70.50
160	3.42	260	11.80	360	25.84	460	47.00	560	74.00
170	4.00	270	12.92	370	27.67	470	49.50	570	77.50
180	4.67	280	14.05	380	29.46	480	52.00	580	81.00
190	5.34	290	15.21	390	31.50	490	54.50	590	84.50

Source: Antigua Income Tax Tables, (Advocate Commercial Printing, Barbados).

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INCOME TAX AT VARIOUS LEVELS OF INCOME PER MONTH

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130	1.93	230	8.75	330	20.60	430	39.50	530	64.50
140	2.38	240	9.63	340	22.25	440	41.47	540	67.00
150	2.83	250	10.67	350	24.00	450	44.50	550	70.50
160	3.42	260	11.80	360	25.84	460	47.00	560	74.00
170	4.00	270	12.92	370	27.67	470	49.50	570	77.50
180	4.67	280	14.05	380	29.46	480	52.00	580	81.00
190	5.34	290	15.21	390	31.50	490	54.50	590	84.50

Source: Antigua Income Tax Tables, (Advocate Commercial Printing, Barbados).

Only about 8% of the population are tax payers³ although many other people are earning taxable incomes. Income tax forms approximately 12% of total local revenue and about 4% of Gross Domestic Product. Table 5-3 shows the sources of local revenue and the relationship each bears to total local revenue and to GDP.

Import duty is the largest source of local revenue and represented approximately 28% of total local revenue in 1966. Revenue from this source could be greatly increased if a greater effort were made to eliminate smuggling. A number of people who own boats engage in smuggling. An efficient anti-smuggling team should be established to keep a watchful eye on the actions of smugglers. The penalty for smuggling should be severe so that people will not consider it worthwhile to engage in this activity. The main items that are smuggled into the island are liquor and cigarettes. Perhaps a reduction on the import duty on these items would help to eliminate smuggling and cause a greater volume of these items to pass through customs. The resulting additional revenue may well exceed the loss due to the reduction.

³O'Loughlin, Economic and Political Change in the Leeward and Windward Islands, p. 178.

TABLE 5-3
SOURCES OF LOCAL REVENUE AND THE RELATIONSHIP OF EACH
TO TOTAL LOCAL REVENUE AND TO GDP

Revenue Heads	(\$000)								
	1964			1965			1966		
	Amt	% of To- tal Rev.	% of GDP	Amt.	% of to- tal Rev.	% of GDP	Amt.	% of to- tal Rev.	% of GDP
Import Duty	2,968.0	33.3	11.8	3,000.3	33.3	10.7	3,300	28.7	11.0
Other Customs du- ties	218.3	2.4	0.86	605.0	6.7	2.1	445.	3.8	1.4
Income tax	1,107.7	12.4	4.4	1,060.0	11.7	3.7	1,275	11.1	4.2
Other inland Rev.	956.4	10.7	3.8	1,152.3	12.8	4.1	1,336	11.6	4.4
Other true revenue	1,289.8	14.4	5.1	960.5	10.6	3.4	2,319	20.2	7.7
Total true revenue	6,540.2	73.2	26.0	1,777.8	75.1	24.2	7,339	63.9	24.5
Other revenue	2,387.8	26.8	9.5	2,241.4	24.9	8.0	4,135	36.0	13.8
Total local rev.	8,928.0	100	35.5	9,019.2	100	32.2	11,475	100	38.2

Source: An Abstract of Statistics.

Another serious problem which has to be reckoned with is the difficulty of collecting taxes. The difficulty stems in large part from the inefficiency and dishonesty of the administration. Records are badly kept, or not kept at all, and some government revenues are usually long outstanding.⁴

A large part of the inefficiency in the civil service is due to the admission of unqualified persons into the service. The recruiting agent of the civil service is the Public Service Commission. This commission needs to select civil servants on the strength of their qualification and not by any other consideration. Frequent investigations need to be made of the records of the various departments, and severe penalties should be imposed on those who are discovered to be dishonest.

A common occurrence is for importers to avoid paying the full customs duty by bribing the custom officers. I know of cases where taxable goods have been imported and where the custom officers, simply dismiss the idea of a tax by writing on their records "not subject to duty."

Very few taxi drivers pay tax and those who do pay

⁴Report of the Senior Auditor on the Accounts of Antigua for the year ended 31st December, 1965. pp. 1, 8.

get away with a great deal. The reason for this is that at present no efficient method is being used in the collection of taxes from them. Taxi drivers should be forced to equip their taxis with meters as a means of indicating the amount of money they earn. This system would enable the government to tax them accordingly. At the end of 1965, there were 747 taxis in Antigua (see Table 5-4). Most of these taxis make several trips to the airport from which they handle a large volume of business as no other form of transportation is available from the airport. Government revenue would increase significantly if a tax of \$0.25 were imposed on each taxi that goes into the airport.

Storekeepers also get away without paying sufficient taxes. They do not keep accurate records of their sales, so adequate tax collection from them is difficult. Tax inspectors should be appointed to keep a close watch on storekeepers, and the tax evasion law needs to be vigorously enforced. These measures are likely to increase the government revenue.

Sales tax has never been tried in Antigua. This device could be introduced with a great measure of success. Table 5-4 shows that in 1965 there were over 4,000 vehicles in the island. The number has doubtlessly increased since

TABLE 5-4
NUMBER OF MOTOR VEHICLES PER 1000 POPULATION 1964 AND 1965

	1964		1965	
	No.	No. per 1,000 Population	No.	No. per 1,000 Population
Private Cars	1,360	25.2	1,516	27.6
Taxis	645	12.0	747	13.6
Total Cars	2,005	37.2	2,263	41.2
Trucks	254	4.7	251	4.6
Vans and pick-ups	450	8.3	342	6.2
Buses	105	1.9	108	2.0
Motor cycles	559	10.4	559	10.2
Tractors	275	5.1	259	4.7
Other vehicles	42	0.8	298	5.4
All vehicles	3,690	68.4	4,080	74.3

Source: An Abstract of Statistics.

that time. A sales tax of about five per cent on gasoline should earn a significant increase in government revenue. Other commodities on which a sales tax could be imposed without placing too heavy a burden on people in the lower income bracket are motor vehicles, liquor, cigarettes and other luxury goods. As the economy develops, the sales tax could be extended to other commodities.

Another possible source of government revenue is the introduction of parking meters on the most busy streets in the city. There is no reason why this system should not be successful because it has become quite a problem to find parking space on some streets in St. John's during the days. A rate of five cents per hour should be reasonable.

Under-employed Labour

The transfer of under-employed labour to more productive work would increase GDP, and this would generate savings which could be used for capital formation. Unfortunately, not much attention is given to this source at present. Under-employed labour could be used to improve the condition of roads in the villages, and to improve the general appearance of the community. These arrangements would increase productivity on the farms as surplus labour is removed, and at the same time, the previously under-

employed workers would now be engaged in productive work.

Professor Lewis has suggested the following model of government expenditure in under-developed countries.

TABLE 5-5
SUGGESTED GOVERNMENT EXPENDITURE IN UNDERVELOPED COUNTRIES

Head	% of National income
Education	3.0
Public Health	2.0
Economic services ⁵	3.0
General Administra- tion and Welfare	4.0

Government expenditure on various services, and the relationship of each to GDP for the years 1964 and 1966 are given in Table 5-6. In 1966, the government spent about 3.7% of GDP on education as against 3% suggested by Lewis, 5.6% on public health and social services and 3.4% on administration. Professor Lewis has also estimated that a growth rate of about 4% per annum requires that a country save about 25% of its national product. One-half of this or about 12% of

⁵These include communications, agriculture and geology.

TABLE 5-6
GOVERNMENT EXPENDITURE AND RELATIONSHIP TO GDP FOR 1964 AND 1966

(\$000)

Head	1964		1966	
	Amt.	% of GDP	Amt.	% of GDP
Administration	780.2	3.10	1,017.3	3.39
Revenue Departments	279.5	1.11	334.4	1.11
Education	886.8	3.53	1,134.6	3.78
Health & Social Services	1,409.2	5.61	1,706.4	5.68
Public Works	1,651.6	6.58	1,807.4	6.02
Agriculture	682.3	2.71	494.7	1.64
Law and Order	574.3	2.28	871.7	2.90
Public Debt Charges	222.2	0.88	1,531.6	5.10
Pensions	417.6	1.66	419.3	1.39
post Office	184.6	0.73	263.3	0.87
Subsidies and Regional subventions	270.0	1.07	230.0	0.76
Total	7,358.2	29.31	9,810.8	32.70
Public Utilities	1,549.2	6.17	984.3	3.28
Total (All heads)	8,907.4	35.48	10,795.1	35.98

Source: An Abstract of Statistics.

national output, is needed to provide an adequate framework of public services, the other half is required for capital formation.⁶ Capital formation in Antigua for the period 1953-1959 is given in Table 5-7.

Foreign Sources

The three sources that have been mentioned so far are not likely to be adequate to meet the supply needed for development. External sources must be explored. There has been a great deal of discussion centered around the wisdom of giving aid to the underdeveloped countries. The practice is condemned by some on the grounds that grants and loans to the underdeveloped countries are merely wasted because of inefficiency in the recipient country. Another argument advanced against foreign aid is that the underdeveloped countries are poor by their own choice. They could attain a higher standard of living by working harder and by saving more. Why then should aid be given to them? Thus runs the argument. On the other hand, Robert Theobald believes that the advanced countries are morally obliged to help the underdeveloped countries.⁷

⁶W.A. Lewis, "Some Reflections on Economic Development" Leading Issues in Development Economics, p. 96.

⁷Robert Theobald, The Rich and the Poor (New York: The New American Library, 1960), pp. 132-133.

TABLE 5-7

CAPITAL FORMATION IN ANTIGUA 1953-1959

Year	(\$000)							
	Private fixed capital formation	% of GDP	Public fixed capital formation	% of GDP	Total fixed capital formation	% of GDP	Changes in Stocks	Total capital formation
1953	821.6	6.8	581.2	4.8	1,402.8	11.6	220.0	1,622.8
1954	1,424.8	13.3	749.4	7.0	2,174.2	20.3	-259.3	1,914.9
1955	1,636.1	13.2	556.3	4.5	2,194.4	17.7	-170.5	2,021.9
1956	1,694.9	10.6	865.6	5.4	2,560.5	16.1	-281.2	2,279.3
1957	2,678.6	14.8	980.4	5.4	3,659.0	20.2	-442.5	3,216.5
1958	3,172.6	17.6	1,100.9	6.1	4,273.5	23.7	503.0	4,776.5
1959	2,932.0	14.0	1,541.2	7.4	4,473.3	21.4	529.5	5,002.7

Source: O'Loughlin, "Problems in the Economic Development of Antigua."

Whatever may be the rationale for economic aid from the economically advanced countries to the poor countries, it is obvious that Antigua is unable to raise the necessary capital required for its development purposes without resorting to foreign aid. The foreign sources with which I am concerned are economic aid in the form of loans or grants, and private foreign investment.

Economic Aid

Antigua has been able to borrow funds from abroad to forge ahead with its development projects. But these loans have to be repaid and this implies a considerable sacrifice in the future, unless the return on the loans is so great that it can be repaid with ease. It is estimated that the national debt now stands at \$47 million.⁸ This is by no means a small sum when one considers that the GDP was projected to be only about \$40 million in 1969.⁹ Grants from Britain, Canada and the United States have been an invaluable source of capital for the island (see Table 5-8). But newly independent states do not like to accept grants

⁸"An Analytic View of Our Economic Situation" in Outlet, Vol. 1, No. 4, October 1969, p. 5.

⁹O'Loughlin, "Problems in the Economic Development of Antigua", p. 249.

TABLE 5-8
EXTERNAL AID TO ANTIGUA 1961-66

Year	Amount (\$)
1961	2,286,673
1962	2,478,126
1963	190,994
1964	172,854
1965	206,578
1966	191,283

Sources: 1. Antigua Report, 1961-1964.

2. Antigua Estimates for 1966, (Antigua: Government Printing Office).

because it reminds them of colonialism from which they are supposed to be free. This feeling is particularly strong in Antigua, and the following quotation from one of the island's newspapers expresses the opinion of many Antiguans:

....one morning we may awake to find an American flag flying here and that we have become a colony again, this time an American colony.....What a sad state of affairs this would be! Just think about this, Brothers and Sisters.¹⁰

Apprehensions of this sort notwithstanding, effort is being

¹⁰Outlet, pp. 5,8.

made to attract private foreign investment to the island. The advantages of private foreign investment over economic aid are mainly these: there is no loan to be repaid and there is no feeling of obligation and subjection to the donor country as in the case of economic aid.

Private Foreign Investment

The Antigua government has provided incentives for foreign investment in the form of tax concessions. For example, there is a law which provides for the free entry of building materials and equipment for hotels.¹¹ Government incentive has also taken the form of "free" land as in the case of the West Indies Oil Company. The government has given to this company for a period of ninety-nine years, all the land it needed for the construction of an oil refinery.

Despite the fact that capital shortage is such a problem in Antigua, very little care is taken to maintain the existing capital in good shape. A few years ago, the Canadian government donated an ambulance to Antigua. Within two years, it was ready for the scrap heap, all because of

¹¹The Revised Laws of Antigua, Chapter 364, Hotels Aid
(London: Waterlow and Sons Ltd., 1965), p. 3308.

inadequate care. It is not unusual to see government and private property almost in a state of disrepair as one drives along roads which are in abominable condition. A part of this neglect is the result of lack of adequate funds to make the necessary repairs, but it is due mainly to carelessness on the part of the individuals concerned, in that they make no effort to make repairs when they become necessary. Adherence to the old adage "a stitch in time saves nine" would pay great dividends in this respect.

The Allocation of Investment Resources

The allocation of investment resources is important in any country, whether developed or underdeveloped, but the importance of the efficient allocation of resources increases tremendously in a poor country such as Antigua where the scarcity of investment resources already presents a formidable problem. It is indeed a sad situation that resources so painfully acquired should be wasted because of the lack of careful planning and wise decision-making. This, in fact, is the situation in Antigua. A planning unit exists in name only, and that is not the whole problem, but the members of the planning unit are not planners at all. The reason for this is mainly political and will not be discussed here. But the result is that for the most part, investment

takes place without any efficient planning. For example, an arrowroot factory which was constructed in 1959-60 operated for only eleven weeks in 1962, at which time it processed the meager total of 202.98 tons of rhizomes from which 408,902 pounds of starch were extracted.¹² No form of encouragement whatever was given to farmers to increase their crops of arrowroot, so the factory was not supplied with sufficient arrowroot to keep the plant working anywhere near full capacity. The factory is still standing but its operation is a thing of the past.

Another example of this lack of careful planning and wise decision-making so typical of the Antiguan economy is the case of the castor-oil project. Not many years ago, a few fields were prepared for the plantation of castor trees. The motive was the production of castor-oil. Within a few weeks, the fields were planted and in a matter of a few months, they were ready for harvesting. Less than a half of these fields were reaped, and what became of the valuable seeds is still a mystery to most people. Those that remained in the fields were left to the mercy of the natural elements--wind, sun and rain. No castor oil was extracted because the

¹²The Industrial Development Board, Annual Report, 1962 (Antigua: Government Printing Office, 1965).

construction of the proposed factory never took place.

Another aspect of the allocation of investment resources needs to be examined, and this pertains to the combination of factors. Most economic activities can be performed by using different combinations of capital and labour, and the combination that is most economical will depend on conditions existing in the country under consideration. In Antigua, investment is often made without giving thought to this factor, and the inevitable consequence is that the contribution of such investment to the economic development of the country falls far below expectations.

One of the factors responsible for this is the proximity of Antigua to the United States and Canada, and the influence of the West on the island. Certain capital equipment used in the highly industrialized countries are introduced into the island. These are usually capital-intensive, so that a large number of workers becomes unemployed as no additional jobs are created to use up the displaced workers. A good example of this is the introduction of mechanical loaders in the sugar industry. When the Antigua Syndicate Estates introduced mechanical loaders, a number of cartmen and women lost their jobs, and a considerable time elapsed before some of them could find new

jobs. This is not to deny the importance of new techniques and capital-intensive equipment in production, but the point I am trying to make is that such techniques and equipment should be introduced only when the economy is ready for them, and they should be employed in the appropriate sectors of the economy.

CHAPTER VI

TOURISM

Tourism and Development in Antigua

In Chapter I, it was pointed out that Antigua was poor in natural resources and that the numerous sandy beaches could be considered one of the island's greatest assets. Commenting on the potentialities and attractions of the island as a tourist resort, the Zinder report on Tourism in the Eastern Caribbean stated:

From the point of view of tourists, this island has practically flawless weather, because it rarely rains where the beaches are. And it has a wealth of very good beaches, among the best in the Eastern Caribbean. Moreover, it has excellent air connections, the best in the region. And next to Barbados, it has the most hotel rooms suitable for tourists.¹

The beautiful beaches and a most pleasant season from November to May are of tremendous importance for the development of the tourist industry in Antigua.

The difficulties which agriculture faces have been discussed in a previous chapter, and because of the small

¹Outlet, p. 5.

size of the island, the manufacturing industries which can be successfully undertaken, assuming the availability of funds, are severely limited. The economic future of the island seems to depend a great deal on the development of the tourist industry, and there is no doubt that Antigua has an excellent opportunity of developing a booming tourist industry.

Despite the fact that tourism is occupying such an important place in the island's economy, very little effort is being made to keep Antigua's beaches in a fashion which is likely to encourage their use by tourists. Tourism is presently responsible for an estimated 89% of the national income.² Keeping the beaches in good shape is of vital importance to the future development of the island in general and of the tourist industry in particular. The only beaches to which attention is given are the ones on or near which hotels have been constructed. This is due largely to the fact that Antigua's tourist industry is geared primarily to one class of tourists, and that is, the high-rate tourists who use the beach facilities provided by the hotels at which they are guests. A body res-

²Ibid, p.8. This appears to be a somewhat over-generous figure.

possible to the Antigua Tourist Board, should be appointed to keep the beaches in good condition. Rooms should be constructed on each major beach, and roads leading to these beaches should be maintained in good condition.

The tourist industry would expand if an effort is made to attract middle-income tourists. Middle-income tourists are more widely scattered than high-income tourists, so by concentrating also on middle-income tourists, the island would draw visitors from a wider area, and would therefore be less dependent on changing conditions in any particular area. Concentrating on middle-income tourists would require more guest houses. To meet this demand, a number of low cost housing could be provided near these beaches.

One of the greatest problems which presently faces the tourist industry is the lack of water. The situation became so acute a few years ago that Antigua lost many of its tourists. Some of them shortened their stay and returned home while others went to other islands in the area. If the tourist industry is to flourish, every effort must be made to ensure that short-comings of this nature are eliminated.

Most of the tourists who visit Antigua are from

the United States and Canada (see Table 6-1). In 1963, 20,545 or about 40% of the tourists who visited Antigua were from the United States, and 9,270 or approximately 18% of them were from Canada. By 1968, the number of tourists from the U.S.A. jumped to 30,296 or more than 54% of the total. In the same year, the number of tourists from Canada totalled 7,473 or approximately 13%. As will be seen later, there have been promotional tours to the United States and to the United Kingdom and Europe. The increase in the percentage of tourists from the U.S.A. and the United Kingdom may in part be attributed to these tours. There have been no similar tours to Canada. Besides, it is a well-known fact that the American people are the greatest consumers of the "products" of the tourist industry, and Antigua is only about three and a half hours away from New York by jet.

Tourist Attractions

The island has other attractions besides beautiful sandy beaches and a delightful winter season. Nelson's Dockyard, situated in the southern part of the island, is of historic significance. Its importance derives from the fact that it served as a naval base in the 18th Century. It was there that Lord Nelson refitted his ships for the Battle of

TABLE 6-1
VISITORS TO ANTIGUA BY COUNTRY OF
ORIGIN FROM 1966 TO 1968.

Country of Origin	1966		1967		1968	
	No.	%	No.	%	No.	%
U.S.A	28,863	51.8	30,837	52.1	30,296	54.2
Canada	8,188	14.7	8,362	14.1	7,473	13.3
United Kingdom	3,460	6.2	4,567	7.7	4,544	8.1
British West Indies	8,535	15.3	6,980	11.8	5,425	9.7
French West Indies	1,301	2.3	1,232	2.1	972	1.7
Commonwealth Countries	1,820	3.2	944	1.6	770	1.3
Guyana	304	0.5	545	0.9	609	1.1
Jamaica	229	0.4	499	0.8	415	0.7
Trinidad and Tobago	1,030	1.9	1,494	2.5	1,504	2.7
South America	120	0.2	259	0.4	332	0.6
Netherland West Indies	100	0.2	305	0.5	298	0.5
Europe	386	0.7	1,116	1.9	1,025	1.8
Barbados	*	*	863	1.4	1,150	2.0
All Other	1,321	2.4	1,171	1.9	1,025	1.8
Total	55,657	100	59,174	100	55,838	100

Source: Tourist Board Statistical Report, 1966-68.

* Included in British West Indies.

Trafalgar. The old naval buildings at the Dockyard have been restored and the Admiral's House has been turned into a museum. Shirley Heights, over-looking the Dockyard, was the main look-out point in Nelson's day. At Shirley Heights, one can still see the ruins of forts, barracks and a military cemetery. These are all in very bad condition and are almost covered over in bushes. The ruins of old forts such as Monk's Hill are equally impressive and are as badly preserved as those at Shirley Heights.

These historical monuments are important in any programme to attract more tourists to the island. These sites should be prevented from running into copse, and be beautified. The existing historical buildings should be left undisturbed so that their appeal to tourists may be enhanced. The body suggested above to improve the beaches should also be charged with the responsibility of beautifying these sites. The co-operation and financial support of business enterprises such as hotels and other concerns interested in the tourist trade might be enlisted. Roads leading to all these sites except the Dockyard are in very poor condition. The same can be said of roads leading to many of the beaches. In fact, many of them are quite inaccessible by land. The rapid development of the tourist industry demands that all these roads be quickly improved.

The Fig-tree drive around the rugged hills in the south presents a constant charm even to the traveller who is accustomed to the site. There are many other scenes of lasting beauty. The Antiguan's are a very friendly people by nature, and the warmth with which the tourists are welcomed is a mark in favour of the industry. Perhaps cheap liquor, the cheapest in the Caribbean is an added attraction to tourists. This assertion however, would be quite difficult to verify.

Some Advantages of Tourism

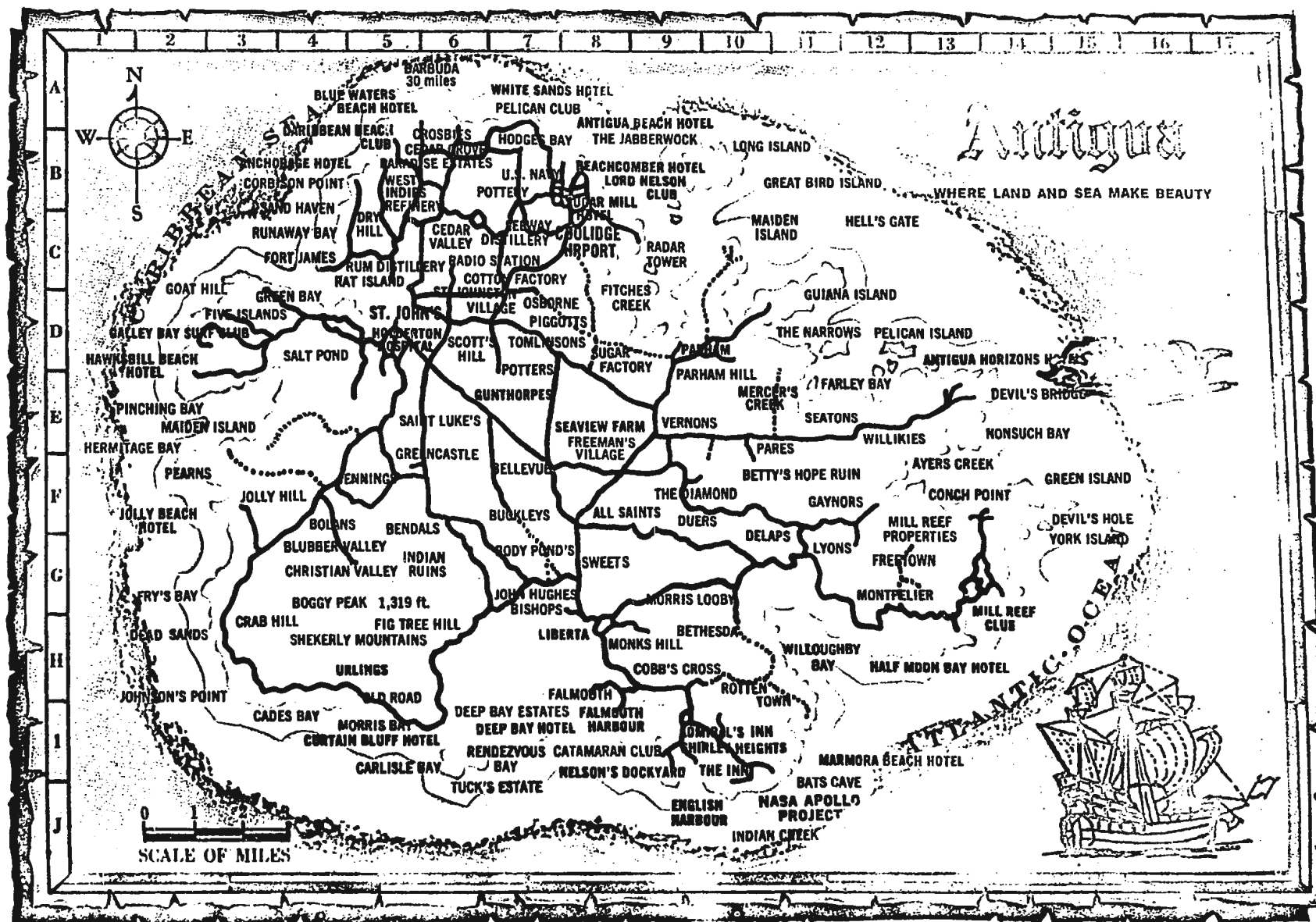
The development of the tourist trade is probably the easiest way to foster development in Antigua. The tourist industry does not require as much assistance from the government as do agriculture and manufacturing industries, and the external economies which it provides are numerous, so numerous in fact that the tourist industry is sometimes considered, not as a single industry, but rather as a whole chain of industries, all directly connected. This way of looking at it has the advantage of unveiling the true nature of the industry.

Tourism is in itself relatively labour-intensive and compares favourably with other economic activities as a

guarantor of employment. Approximately 1,200 persons are employed at Antigua's hotels alone. Besides creating employment directly for hotel workers, the benefits of the tourist trade are diffused throughout other sectors of the economy, affecting all parts of the service sector and construction, while at the same time, providing a stimulus to agriculture. Thus the externalities of the tourist industry are indubitably extensive.

Tourism is also favourable to the economic development of Antigua from another view point. The world demand for travel is growing at a faster rate than the demand for merchandise exports. H. David Davis has pointed out that international tourist receipts between 1958 and 1967 rose by an annual average of 11.2%, compared with 7.4% for world exports.³ If we accept this information, what is its implication for the economic development of Antigua? It means that Antigua will be in a better position, economically, if it concentrates more on tourism, since the prospects in this area are much brighter than for sugar or cotton. This however does not suggest that agriculture should be ignored while attention is being focussed on tourism.

³H. David Davis, "Potentials for Tourism in Developing Countries", Finance and Development, Vol. 5, No. 4, December 1968, p. 39.



The Growth of the Tourist Industry

The growth of the tourist industry has been fairly rapid and this fact has proved to be rather propitious when one considers the corresponding and simultaneous decline of the sugar industry. From a single hotel built in 1940, Antigua can now boast of an impressive number of resort hotels throughout the island on some of the best beaches anywhere in the area. At present, there are no less than thirty resort hotels, in addition to eighteen apartments and cottages, and seven guest houses, and the number of beds is estimated to be in the neighbourhood of 1,830.⁴ Despite the rapid increase in the number of hotels and guest houses within the past few years, visitors and potential visitors to the island still experience a considerable amount of difficulty in obtaining accommodation as existing accommodation is inadequate to meet the present needs. This is particularly the case during peak hotel seasons. I remember in 1963 when I was an assistant to the Office Manager at one of the hotels, a number of requests for accommodation had to be turned down because there was just not enough room. Most of the hotels are usually booked up several weeks before the season begins.

⁴Antigua Tourist Statistics, 1969.

Two hotels of three hundred rooms each are to be constructed, and many of the existing ones are expanding their accommodation. The number of beds will reach a figure of 2,660 when these are completed. These improvements should help to alleviate the situation to a great extent. The number of hotels and guest houses, with the corresponding number of beds from 1940 to 1969 is given in Table 6-2.

The number of tourists visiting Antigua has increased rapidly over the years. In 1953, there were only 5,270 visitors to the island. By 1958, this number had increased by more than 100%. During 1966 and 1967 alone, the number increased from 55,657 to 59,174 or by more than 6%. These figures do not include cruise ship visitors. In 1960, only nine cruise ships called at the island. By 1968, the number of calls had increased to forty-three. The number of visitors by cruise ships also increased tremendously. There were 4,241 cruise ship visitors in 1960. This number increased to over 14,000 in 1967 but decreased to less than 13,000 in 1968. A breakdown of the number of tourists who visited Antigua from 1953 to 1968 is given in Table 6-3, and the monthly visits from 1966 to 1968 are given in Table 6-4. In an effort to increase the number of tourists in the summer months, the hotels offer special summer (off season) rates. This gesture on the part of the hotels, and the

TABLE 6-2
HOTELS AND GUEST HOUSES AND NUMBER OF
BEDS IN ANTIGUA 1940-69

Year	Hotels and guest Houses	No. of beds
1940	1	n.a.
1954	3	n.a.
1957	4	n.a.
1958	5	188
1959	7	n.a
1960	14	325
1961	22	936
1962	26	1,366
1963	27	n.a
1964	28	1,700
1966	30	n.a.
1967	32	1,724
1968	34	n.a
1969	37	1,831

- Sources: 1. Antigua Report, 1961-1964.
 2. Antigua Independence.
 3. West Indies Chronicle, November, 1967.
 4. Antigua Tourist Statistics, 1969.

TABLE 6-3

VISITORS TO ANTIGUA FROM 1953 TO 1968 AND
CRUISE SHIP CALLS FROM 1960 TO 1968

Year	No. of calls	Cruise ship visitors	Visitors by Air and Sea	Total
1953	n.a	-	5,270	-
1954	n.a	-	6,333	-
1955	n.a	-	6,897	-
1956	-	-	8,319	-
1957	-	-	9,500	-
1958	-	72	12,781	12,853
1959	-	4,312	16,451	20,763
1960	9	4,241	25,380	29,621
1961	12	2,560	26,512	29,072
1962	9	2,080	35,101	37,181
1963	20	6,426	43,272	49,698
1964	18	5,365	46,118	51,483
1965	26	9,358	48,651	58,009
1966	36	13,314	55,657	68,971
1967	40	14,684	59,174	73,858
1968	43	12,788	55,838	68,626

Sources: 1. Antigua Tourist Statistics, 1969.

2. Antigua Report, 1961-64.

TABLE 6-4
MONTHLY TOURIST ARRIVALS IN ANTIGUA 1966-68

Month	1966	1967	1968
January	5,605	6,001	5,467
February	6,654	7,314	7,138
March	6,314	6,745	6,255
April	5,239	4,803	4,594
May	3,272	3,640	3,279
June	3,184	3,714	3,188
July	5,900	4,956	4,948
August	4,590	5,135	5,200
September	2,586	3,009	2,827
October	2,960	3,000	2,928
November	4,009	5,303	4,310
December	5,344	5,554	5,704
Total	55,657	59,174	55,838

Source: Antigua Tourist Board, Statistical Report, 1966-68.

institution of lower summer rates by some airlines, have caused the summer traffic to increase a great deal. Moreover, since the inauguration of the carnival festivity in July-August 1958, many visitors have come to the island each year specifically for this grand occasion. These factors have prevented the number of visitors from falling to very low levels in the off season months (see Table 6-4).

The length of stay of each tourist is important from the point of view of expenditure. Other things being equal, the greater the share of long stays, the larger the average expenditure of each visitor is likely to be. Table 6-5 shows the relationship between over-night visitors, visitors who stayed under one week, and visitors who stayed longer than one week in each month of 1968. Only arrivals by air are included. It has been estimated that in 1959, tourists spent about \$5,285,500 in Antigua. This amount rose to about \$13,000,000 in 1965⁵ and to approximately \$17,800,000 in 1969⁶, an increase of about 37% between 1965 and 1969. Table 6-6 contains data on tourist expenditure in the island from 1957 to 1959.

⁵An Abstract of Statistics.

⁶Outlet, p.5.

TABLE 6-5
MONTHLY ARRIVALS BY LENGTH OF STAY,
AIR ONLY 1967 AND 1968

Month	1967			1968		
	Over- night	Under one week	Over one week	Over- night	Under one week	Over one week
January	1,325	2,214	2,263	934	1,944	2,470
February	1,377	2,316	3,587	1,062	2,281	3,670
March	1,325	2,225	3,133	768	2,168	3,142
April	1,052	1,871	1,754	761	1,915	1,790
May	1,015	1,621	1,091	619	1,734	849
June	1,056	1,439	1,090	715	1,463	877
July	1,241	1,785	1,774	933	2,347	1,531
August	1,332	2,072	1,576	714	2,368	1,977
September	1,006	1,218	681	742	1,202	778
October	926	1,283	713	632	1,375	782
November	1,174	2,348	1,673	583	1,937	1,681
December	1,188	1,737	2,554	936	1,847	2,830
Total	14,017	22,129	21,789	9,399	22,581	22,377

TABLE 6-6

COMPONENTS OF TOURIST EXPENDITURE IN ANTIGUA 1957-59
(\$000)

Items	1957	1958	1959
Hotel bills, including bar, laundry, service charge, etc.	1,805.5	2,320.0	3,006.3
Direct wages, including tips	250.0	275.6	298.2
Transport, including taxis, hire cars, gasoline, service	401.2	430.0	558.0
Sport and entertainment, including yachting, golf, cinemas, shows, etc.	175.0	200.0	244.7
Services not specified, hairdressing, dress-making, business services, etc.	113.7	139.0	191.5
Purchases from shops, agencies, etc.	750.0	775.4	986.8
Total	3,495.4	4,140.0	5,285.5

Source: O'Loughlin, "Problems in the Economic Development of Antigua."

The government of Antigua has passed legislation with the view of promoting tourism. The following extract from the Investors' Guide will give some indication as to the type of incentives that are being given for the promotion of tourism:

The Hotels Aid Ordinance provides for the following

benefits in respect of the construction of new hotels or the extension or renovation of existing ones:-

- (a) Duty free importation of building materials and articles of hotel equipment.
- (b) Any person who proposes to construct a new hotel or extend an existing one to contain when completed not less than ten bedrooms, may be granted a licence by the Cabinet to import or purchase locally certain building materials and articles of hotel equipment free of Customs Duty and package tax.
- (c) Qualifying hotel owners are given in addition an Income Tax holiday for a period of five years and hereafter in each of any five of the next eight years of operation will be allowed to set off, against the income arising therefrom, one-fifth of the capital outlay.
- (d) The income tax concessions mentioned in (c) apply equally to dividends arising from investment in any hotel licensed under this Ordinance.⁷

Some people think that the concessions are too generous. I do not have enough information to make a qualified decision on the issue, but one thing is sure, these incentives have contributed to the growth of the tourist industry.

Communication

The importance of communication to the development of a country can hardly be exaggerated. The importance is even more apparent when one is dealing with a country which is highly dependent upon foreign trade. The presence of

⁷State of Antigua, Investors' Guide (Antigua: Government Printing Office), pp. 9-10.

an international airport in the island has made significant contributions to the tourist industry. There are direct flights connecting Antigua to the U.S.A. and Canada, as well as easy connections to the other West Indian islands, the United Kingdom and Europe. Among airlines operating in Antigua at present are British Overseas Airways Corporation, Pan American Airways, Air Canada, Leeward Islands Air Transport, British West Indian Airways, Air France, Caribair, and Sea Green Air Transport which is concerned mainly with chartering.

Aid from Canada has made it possible for the government to begin work on the extension of the runway at the airport. When this is completed, the runway will have a length of 9,500 feet. Provisions are also being made for additional parking aprons. The rapid increase in traffic at the airport has rendered the present facilities inadequate and a new terminal building is expected to be constructed in the near future. Table 6-7 shows total traffic at the airport in 1967 and 1968.

These developments will make it possible to accommodate a greater amount of traffic and this is of vital importance to the development of the tourist industry, and indeed, to industries as a whole. Cruise ship visitors to

196.

TABLE 6-7
TOTAL TRAFFIC AT COOLIDGE AIRPORT (ANTIGUA)
IN 1967 AND 1968

Months	1968		1967	
	Arrivals	Departures	Arrivals	Departures
January	10,155	10,289	9,074	9,403
February	12,554	11,733	10,568	9,201
March	12,311	11,943	10,112	10,867
April	10,080	9,825	7,697	8,230
May	6,965	6,718	6,494	6,263
June	7,203	7,019	6,380	5,905
July	9,609	8,696	8,497	7,678
August	10,794	11,657	8,890	9,892
September	7,175	7,269	6,485	6,327
October	6,446	6,275	5,889	6,279
November	8,592	7,999	8,312	8,048
December	13,116	11,237	10,218	9,164
Total	115,000	110,660	98,616	97,257

Source: Antigua Tourist Board, Statistical Report, 1968.

Antigua have not been numerous in the past owing to the lack of adequate berthing facilities. A deep water harbour was opened in the island on October 31, 1968 with proper berthing facilities, a modern terminal building, proper parking areas for taxis, and a number of shops catering especially for visitors. These attractions are likely to increase the number of cruise ships which call at the island. In fact, it has been reported that since the construction of the harbour, many cruise ships have already docked there.

Before I leave the subject of communication, permit me to digress a little in order to say something about a subject that is really not too far afield. I am referring to the system of transportation without which, the tourist industry could hardly survive, let alone flourish. The taxi service is fairly well developed, and self drive cars are available on a well-organized basis. A recent development, and one which is likely to attract a large number of tourists is the conversion of one of the sugar-cane locomotives into a train for the purpose of making tours through some of the sugar-cane fields.

Advertising

Very little advertising is done to promote the attrac-

tions of the island to tourists. The Antigua Tourist Information Office in New York was closed down in 1962 and has not been re-opened since. The West Indian Tourist Information Office in Canada to which Antigua contributed, was closed down in the same year and there has not been any replacement for this. The Eastern Caribbean Commission in Montreal is doing what it can to help tourism in the Eastern Caribbean, but tourist promotion is not the responsibility of the Eastern Caribbean Commission, and although its efforts must be greatly appreciated, they are grossly inadequate when compared with the large-scale advertisement that is so desperately needed. The number of complaints regarding the difficulty of obtaining proper information on the island is an index of the need to advertise.

In 1958, a number of hotels in Antigua, along with airlines, travel agents and merchants who do business with tourists, formed the Antigua Hotel Association. This association has done much to advertise tourism in Antigua in other areas of the world. It also encourages and supports the hotel school which is backed by the United Nations. This school provides training for men and women to be hotel waiters, bartenders and maids. The Antigua Tourist Board, a government body, is also concerned with tourist promotion in Antigua. The Tourist Board and the Hotel Association

made a successful promotional tour of the United Kingdom and Europe in 1963 under the sponsorship of B.O.A.C. This was followed up in 1964. A similar tour to the major cities of the United States was undertaken in the same year, sponsored by Pan American Airways. These tours proved rather successful, measured in terms of the increase in the number of tourists to the island, but unfortunately, they have not been followed up. However, in 1967, members of the tourist Boards of the Leeward and Windward Islands and the British Virgin Islands, united for a tourist promotional visit to the United Kingdom, again under the sponsorship of B.O.A.C.

The construction of the Mill Reef residential area has also done much to boost the tourist industry. American families who have properties at Mill Reef spend several months of the year in the island. They also tell their American friends of the attractions of the island, and often invite some of them down as guests. The presence of an American Base on the island also has some impact on the tourist industry. It helps to make a lot of people aware that there is such a place as Antigua on the map.

There are many other tourist resorts besides Antigua, and if the island is to capture a fair share of the

trade, then large-scale advertisement is essential. Advertisement should be made in most of the popular magazines. Advertisement on radio and television, and by film strips is expensive, but the Antigua Tourist Board could unite with other tourist boards of the area and undertake such advertisement on a fairly wide scale. The important thing is to make Antigua known, not only to North America and the United Kingdom or even Western Europe, but farther, much farther afield.

Disadvantages--Actual and Potential

The advantages to be gained from tourism are many, but there are certain disadvantages--some economic, some social, which should not be ignored. Tourism has caused local retail prices to rise. Moreover, some goods which used to be fairly common items of consumption among the local people have now become unavailable as they are sold directly to the hotels. Good examples of such items are certain types of fruit and vegetables, and lobsters. A few hotel owners have been known to impose a colour bar and have tried to raise prices to local customers, but this practice is rare and the government is extremely severe against such actions. There is also the fear that the tourist industry might lead to the development of undesirable acti-

vities such as drug peddling, illegal gambling and prostitution. The government met with violent opposition, mainly from the churches, but also from a substantial number of other people, when it decided to grant a licence to one of the hotels to operate a casino in the island. This little episode is an indication of the attitude of most Antiguan towards such activities as gambling. However, the casino is well-run and cannot be truly said to encourage vice; and the government is collecting the sum of \$100,000 annually as licence fee. Drug peddling has not yet caught on in Antigua, and prostitution and other distasteful activities have not developed in the island as a result of the tourist industry. But the danger is there and the fear is certainly not ill-founded. A vigilant attitude must constantly be assumed to prevent the emergence of such objectionable activities.

CHAPTER VII

SUMMARY AND CONCLUSIONS

In addition to the general problems of underdeveloped countries, Antigua suffers from the particular problem of size. Nevertheless, the economy has made considerable progress over the past few decades. The Gross Domestic Product increased from \$12.4 million in 1955 to about \$40 million in 1969, an increase of more than 220% over a period of fourteen years. On the other hand, the population increased from about 52,000 in 1955 to approximately 67,000 in 1969, an increase of only 29% over the same period. In other words, per capita income increased from about \$240 in 1955 to about \$600 in 1969, an increase of about 150%. Total local revenue increased from less than \$500,000 in 1939 to over \$11 million in 1966. Improvements in education and public health have been equally significant.

There has also been a considerable improvement in the employment situation. From a rather high figure of 18.5% of the adult population in 1950, unemployment decreased to 7.2% in 1960. There are four major causes of unemployment in Antigua. These are: (1) overpopulation, (2) unjustified demands by trade unions for higher wage rates,

(3) the unwillingness of workers to stay 'on the job', and (4) the lack of skills. The last two causes can be removed by general education and by an appropriate training programme, and over-population can be solved by birth control and family planning. The second cause is not so easy to remove because of the political nature of the trade unions.

Agriculture once occupied a leading position in the economy, but a series of circumstances has led to its decline. Among them are frequent and severe droughts, the growth of other sectors of the economy, and the reluctance of workers to accept agricultural employment. In 1953, agriculture accounted for approximately 45% of the GDP. By 1964, it accounted for only about 14%. The rapid development of the tourist industry has placed agriculture in the background. However, agriculture cannot be neglected if rapid development is to be achieved. The export of sugar and cotton has been vital to the island's economy, but concentration on only these commodities for export has placed the island in quite unfavourable circumstances. Practically all manufactured goods have to be imported and this is a considerable burden in view of the unfavourable terms of trade.

Industrialization, though limited by the smallness of the island, is possible. A few industries have already been introduced and there is scope for others. The concentration should be on light manufacturing industries as the more advanced countries are specializing in heavy manufacturing industries. Private enterprise should be encouraged to set up these industries, but if the response is unsatisfactory, then the Industrial Development Board should take the initiative. Funds for development purposes can be obtained by instituting a more efficient system of tax collection, by the imposition of sales tax on some commodities, and by the introduction of parking meters. A careful planning of projects should be undertaken to avoid the waste of funds which results from the misallocation of resources.

Tourism is the greatest prospect for the development of the island, and so far, the progress in this area has been gratifying. The number of tourists increased by well over 400% from 1958 to 1968. Expenditure by tourists has also increased considerably. But specializing in tourism also has its disadvantages. Tourism is governed by the whims of the tourists. In fact, it may be regarded as an aspect of foreign trade in which the attractions of the is-

land are 'sold' on the foreign market. Conceived in this manner, tourism is more dependent on the external market than are sugar and cotton. The market for sugar, for example, is both domestic and foreign, but the market for tourism is entirely external. Bearing this in mind, attention should be paid to all classes of tourists and not merely to high-income tourists.

Encouraging though these improvements may be, the economic situation of the island still lags far behind the standards of the advanced countries. But the economic development of the island is gaining momentum. With the present state of awareness of the sacrifices needed, and with the general willingness to make these sacrifices and to participate in the development process, plus the continued assistance of the advanced countries, it is not unreasonable to believe that Antigua will soon join the ranks of those countries which have reached the stage of "sustained" growth.

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