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RECENT DEVELOPMENTS AND TRENDS IN THE ECONOMY OF GUATEMALA

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INTRODUCTION

The radical change in the policy of the Guatemalan Government has been the most important of the numerous events which have taken place since the revolution of October 1944 and which bear a close resemblance to the changes which occurred during the period known as the 1871 Liberal Reform.

The economy of Guatemala, in common with many underdeveloped countries, was characterised by its extensive agriculture, based on the use of cheap labour and consolidated in this particular case by a forced labour system. Socially, the country suffered from a lack of racial and cultural integration, the illiteracy of more than two thirds of its population, high rates of infant mortality and other difficulties which are characteristic of low standards of living.

Being confronted with such conditions, the Government was forced to give priority to projects for their improvement. It was essential to build schools, establish a social security system, formulate a labour code which would recognize and protect labour rights, allow the organization of unions and undertake other energetic measures which absorbed a considerable portion of the Government's attention.

The radical change in economic policy made it necessary to create new instruments for economic action designed to make the new policy effective. The 1945-1949 period can accurately be described as a transition period during which these instruments were being elaborated. Thus it would be premature at this time to pass judgement on the effectiveness of the policy.

Among the numerous economic measures adopted since 1945 are the establishment of:

a) A new monetary and banking legislation which will allow a more effective defence against the violent fluctuations to which the economy of the country is subjected as a result of its close depending upon international markets. This includes a credit policy more in accord with the general needs of the country, including extension of banking facilities to sectors and regions where these services were lacking;

b) An institute for the development of production which will be in a position to carry out research to evaluate the relative advantage of

different fields towards which public and private savings can be directed; which will be able to investigate new investment opportunities, reduce the risks of private investments, through public partnership, and facilitate . . . adequate financing of long-term projects;

(c) An organization to administer the new petroleum law and to encourage petroleum exploration and exploitation;

(d) A system of agricultural research mainly directed towards the solution of the basic problem of efficiency; and

(e) New legislation permitting a more flexible utilization of the instruments of tariff protection by the administrators of economic policy.

As the new economic and social policy was put into effect, it was necessary to increase expenditures. Thus, during 1945 to 1949, Government expenditures were tripled. The expansion of public activities coincides with an increase in the real income of the export sector and investment activity in the private sector of the economy. As a consequence of the combined effect of these factors, the country has been submitted to inflationary pressures of some magnitude.

The increase in real income of the export sectors of the economy arose from the improvement in the terms of trade of the principal export products. The capacity to import, which had declined during the 'thirties to 58 per cent of the 1925-1929 level, was maintained during the period 1945-1949 at an average of 82 per cent above the period 1937-1939 and 50 per cent above the 1940-1944 level.

The annual rate of private capital formation, as measured by the value of imports of capital goods at constant prices, quadrupled between 1945 and 1949. This was, on the average, 23 per cent higher than in 1937-1939. During the postwar period about 40 per cent of the value of imports of capital goods was composed of industrial equipment. These two activities, industry and transportation, have developed most rapidly in the post-war period.

In spite of these achievements the annual rate of increase of production of goods for domestic consumption was lower during the period 1945-1949 than during 1938-1945. The volume of agricultural production, with the exception of bananas and some export products of secondary importance, seems to have remained unchanged after 1945. Industrial production increased after 1946 at the rate of approximately 2.5 per cent per year, but this rate was not / greater than that .

greater than that experienced in the period 1938-1945 (See Table 1). On the other hand, the production of services increase notably. Government services expanded, but the expansion of motor, land and air transportation was apparently more rapid. The considerable expansion of motorized land transportation, however, mainly utilized a system of roads constructed some years ago, which has not been expanded significantly since 1945. Accordingly, the old problem of linking by road the economic heart of the country in the South to the Atlantic Coast and the extensive region of Petén has not yet been resolved.

The higher rate of increase of production for the domestic market in the period 1938-1945 can be explained by the fact that when the war began, part of the country's productive capacity had not been utilized. There was idle industrial capacity in sugar, cement, textiles, electric energy and probably also in other sectors. Although there was no apparent labour unemployment, the degree of labour utilization could be intensified without rapid increases in the wage level. Moreover, certain activities affected by the war were obliged to reduce their volume of operation. The level of exports between 1939 and 1945, for example, was 10 per cent less than in 1938. The combination of circumstances mentioned above contributed to the relative stability of costs, while at the same time the limitation of competition from imports reduced risks

/Table 1

Table 1 Guatemala: Selected Economic Indices

(Simple arithmetical average rates of annual growth)

<u>Production</u>	Periods		
	1938-1945	1945-1949	1938-1949
Coffee	1.3	0.5	1.1
Sugar	9.6	1.7	7.1
Wheat flour	8.1	1.7	6.1
Beef	1.7	4.0	2.7
Pork	2.5	1.5	2.1
Alcoholic Beverages	10.1	8.7	11.8
Cigarettes	10.1	9.9	12.7
Cotton yarn	7.8	13.3	25.3
Cement	18.3	14.7	23.8
Private construction	21.5	11.7	24.4
Electric energy	4.5	11.5	8.2
<u>Monetary Circulation</u>	32.0	6.3	27.3
<u>Wholesale prices</u>	13.6	9.0	...

Sources: Coffee: Export quantum
Wheat flour: Instituto de Fomento de la Producción
Cotton Spinning Yarn: Estimates based on imports of raw cotton.
Other products: Bulletins of the Dirección General de Estadística
Monetary Circulation: International Financial Statistics, October 1950.
Wholesale prices: Estimates for 1938-1945 based on import prices of clothing, textiles and foodstuffs. From 1946 on figures are from the official index.

On the other hand, by the end of the war, productive capacity was already being fully utilized. In addition, there was more intensive competition for factors of production which arose from expanded Government activity and from export sectors ^{1/} a rapid increase in wages and in the prices of raw materials and imported equipment; more intensive competition from imported goods, and adverse climatic conditions. Increases in wage rates brought about in part by the expansionary process itself and partly by

^{1/} In 1945-1949 the volume of exports was 28 per cent greater than in 1940-1944 and 15 per cent over 1937-1939.

the new social legislation, seem to have been greater in some cases than increases in productivity.

Although, as stated before, the rate of increase of production for the domestic market was less between 1945 and 1949 than between 1938 and 1945, the rate of increase in prices was greater in the second than in the first of these periods (13.6 per cent compared to 9.0 per cent after the war). These developments are easily explained if it is remembered that the rate of monetary expansion in 1938-1945 was 32 per cent per year, while after 1945 the annual rate of expansion was 6.3 per cent. Moreover, during the postwar period it was possible to divert an important proportion of the growing internal demand toward international markets,^{1/} which not only permitted the increase of disposable goods but also partly counteracted the monetary effects of larger exports, Government activities and private investment.

The above factors have enabled the country to enter a stage of intense economic activity, although the 1925-1929 per capita real income level has apparently not yet been regained. Government support of the country's economy added to the increase of coffee prices encourage the assumption that this activity will continue. Whereas, during the 'thirties, Guatemala was faced with the problem of economic stagnation, the chief problem now lies in the avoidance of the distortions which a very rapid rate of development may impose upon the economic structure.

^{1/} Imports of consumer goods and raw materials were 80 per cent greater during the postwar period than in either 1937-1939 or 1940-1944.

CHAPTER I THE FACTORS OF EXPANSION

The process of economic expansion which the country has experienced has originated from two types of factors: those which have been independent of domestic demand and those stimulated by the growth of real income. Among the first type, the most important have been the increases in the value of exports and the growth of Government expenditures, Among the second are some types of domestic private investment, especially in inventories, and electric energy.

Table 2 Guatemala: The Factors of Expansion 1945-1949

(Millions of quetzales)

	Capacity to import a/	Government Expenditures ^{b/}	Private Investment	
			Imports of c/ Capital Goods	Private d/ Construction
1945	37.6	17.4	4.5	1.4
1946	47.3	28.8	6.8	1.4
1947	53.7	32.8	13.2	1.8
1948	48.5	45.9	17.4	1.9
1949	44.7	50.8	18.1	2.6

a/ Calculations of the Economic Commission for Latin America (ECLA) based on 1937 prices.

b/ Values at current prices corresponding to the fiscal year ending 30 June of the year indicated. The figures were obtained from monthly data published by the Dirección General de Estadística, excluding Public Debt payments.

c/ Calculations of ECLA based on data from the Dirección General de Estadística.

d/ Boletín del Banco de Guatemala, November 1950; these data cover only private construction in the capital.

Note: One quetzal is equal to one U.S. Dollar.

/ The increase in

The increase in exports

The exports of Guatemala have been on the upswing during the period 1945-1949.

During this period the average annual value of exports at 1937 prices was 15 per cent greater than in 1937-1939. The most notable increases affected secondary export products, the average annual volume of which doubled between these two periods. Chicle and bananas took second place. The increase in the case of coffee was only 12 per cent.

The terms of trade were, on the average, 35 per cent above those in the period 1937-1939 and the capacity to import increased about 40 per cent.

Since 1945 the value of exports at 1937 prices has remained practically stable with the exception of the years 1947 and 1948, when they increased 19 and 12 per cent, respectively, in comparison with 1945. Bananas and chicle were the main contributors to this expansion.

The terms of trade improved sharply in 1946 in relation to 1945 and were maintained in the following years at a level slightly lower than in 1946, rising sharply again at the end of 1949 as a result of the increase in coffee prices. Only in 1950 did the terms of trade reach levels similar to those of the period 1925-1929.

The experience of the last twenty-five years indicates that the major part of the fluctuations in the purchasing power of Guatemala originate in fluctuations in the terms of trade. This characteristic, which has not changed during the post-war period, makes it difficult to offset the effects of cyclical changes in international markets on the domestic economy.

Table 3. Guatemala: Fluctuations in Exports, the Terms of Trade, and Capacity to Import
(1945 - 1950)

Year	Value of Exports		Unit		Capacity to Import			
	Current Prices a/ Millions of Quetzales	Constant Prices b/ Index Millions of Quetzales	Value of Exports	Terms of Trade	Millions of Quetzales	Index		
1945	37.6	100	37.6	100	100	100	37.6	100
1946	51.5	137	37.4	99	138	127	47.3	126
1947	71.9	191	44.8	119	161	120	53.7	143
1948	71.4	190	42.0	112	170	114	48.5	129
1949	62.3	166	35.7	95	175	125	44.7	119
1950 ^{c/}	80.4	214	37.2	99	216	..	..	..

Sources: Bulletins of the Dirección General de Estadística and the Banco de Guatemala.

a/ Based on balance of payments figures except for 1945, which represents declared values in customs, corrected by the value of banana exports in the same manner as the official correction made for the calculation of the balance of payments in 1946 by the International Monetary Fund. The 1950 figure is an estimate based on values for 9 months in the case of coffee, 8 months for bananas, chicle, wood and essential oils, and 5 months for other products. The value of bananas declared in customs has been corrected by the percentage which was used in the official calculation of the balance of payments for 1949.

b/ Calculated by ECLA. The figures include coffee, bananas, chicle, wood, essential oils and honey. The value of other products was deflated by an index of prices of the principal exports excluding coffee.

c/ The 1950 figure is provisional; see note a/ for the method of calculation.

Note: The constant values presented in this table do not coincide with those in the study on economic development, because in this last study it was impossible to correct the undervaluation of bananas given in the customs statistics, and because the base year was changed to 1945.

Up to 1947 the changes in the capacity to import followed closely the changes in the volume of exports, but thereafter the volume of exports fell back to the 1945 level while the capacity to import continued to increase, reaching a figure in 1950 which has been estimated at about 50 per cent above that of 1945.

A comparison of the changes in the capacity to import during and after the war illustrates the different ways in which the stimulating effect of
/the export sector

the export sector reflected on the domestic economy. Although during the war the capacity to import was maintained on an average of only 5 per cent below the 1938 level, all persons employed in export activities, both workers and entrepreneurs (but especially the latter), were compelled by the scarcity of imported goods to spend, or hoard, a larger proportion of their incomes within the country. The imports of consumer durable goods between 1939 and 1945, for example, were 43 per cent below the 1938 level.

When international sources of supply were reestablished in 1945, the population probably tended to redistribute their expenditures between domestic and imported goods in a more traditional pattern; but since total sales had increased substantially, it is possible that the part which continued to be spent within the country was not reduced but increased. For this reason it can be said that exports continued to stimulate domestic demand even when in 1948 the country began to lose foreign exchange which had been accumulated in previous years.

Government Expenditures

Between 1938 and 1944 Government expenditures increased by approximately 70 per cent, an increase which was equivalent to the rise in wholesale prices. Since it is very probable that the increases in Government salaries and wage rates did not increase as rapidly as wholesale prices; Government activities, in real terms, must have increased slightly. This increase was probably less than that of real national income as judged from the figures on production given above and by the development of foreign trade.

The increase in expenditures which took place during this period was financed totally out of taxes and other current income, and the accounts frequently closed with small surpluses. Government bank deposits rose from 4 million quetzales in 1938 to 8.6 million in 1942 and 7.9 million in 1943.

The relative reduction in the tax burden and the cautious financial policy indicate that the economic activity of the Government did not have a stimulating effect during the war.

In contrast, after the fiscal year 1944/45 Government expenditures at current prices almost tripled, and in terms of constant prices they
/rose about

rose about 85 per cent, much more than real national income.

The Financing of Government Expenditures

Current Government income, that is, total income minus income derived from loans and accumulated balances, did not cover total expenditures in four out of the five years during the period studied. Deficits in the first two years were approximately half a million quetzales, or 3 per cent of total expenditures in 1944/45 and 2 per cent in 1945/46. In 1947/48 and 1948/49 the deficits equalled about 6 million quetzales, or 14 per cent of total expenditures in the first case and 12 per cent in the second. In 1946/47 there was a surplus of about 7.8 million, or about 24 per cent of total expenditures. According to preliminary information, in 1949/50 the deficit reached 10 million quetzales, i.e. 20 per cent of expenditures.

Total current Government income increased 163 per cent between 1945 and 1949, and the proceeds of loans increased 129 per cent. The farms expropriated from the Germans during the war provided the most important new source of Government income. As can be seen in Table 4, income from Government enterprises increased notably up to 1949. In 1950 these farms were organized as an autonomous entity from which the Government will in the future receive only a portion of the net profits.

Table 4. Guatemala: The Composition of Government Revenues
(1945 - 1950)

(Thousands of Quetzales)

Fiscal year ending 30 June	Taxes		Government Enterprises		Miscellaneous income a/		Total
	Value	Per Cent	Value	Per Cent	Value	Per Cent	
1945	14,516.2	86.0	1,739.5	10.3	623.9	3.7	16,879.6
1946	20,699.7	73.4	6,756.2	24.0	732.4	2.6	28,188.3
1947	27,471.6	67.8	10,408.1	25.7	2,656.6	6.5	40,536.3
1948	30,639.3	77.3	6,620.1	16.7	2,371.6	6.0	39,631.6
1949	33,281.9	74.9	6,763.0	15.2	4,407.0	9.9	44,452.3
1950	35,093.5		2,170.4		5,148.9		42,413.1

Source: Bulletins of the Dirección General de Estadística.

a/ Except in 1944/45 and 1945/46, miscellaneous income included some amounts from Treasury balances.

/Of the increase

Of the increase in tax yield of 18.7 million quetzales between 1944/45 and 1948/49, 51.5 per cent was accounted for by consumption taxes levied on domestic products, 35 per cent came from increased receipts from exports and imports, and 12.6 per cent was derived from greater revenue from the excess profits tax.^{1/} In 1949/50 there was a slight increase in tax receipts, partly as a result of greater revenue from import duties.^{2/}

It has been estimated that the expansion of the tax base, which necessarily resulted from the process of expansion of the private sector of the economy, contributed about 50 per cent of the total increase in receipts. Had there been no changes in the tax rate, the simple expansion of the economy would by 1949 have produced receipts 66 per cent greater than in 1945. This increase would have been sufficient to finance the increase of Government expenditures due to rising prices.^{3/} It can be said, therefore, that the fiscal deficits in Guatemala have been due to the expansion of Government activities and to the resistance to new taxes and the increase in the rates of existing taxes to the extent that they were necessary to finance this expansion.

The resistance to the introduction of new taxes has not only been the result of unfavourable political conditions. There are certain structural and institutional factors in the Guatemalan economy which make it difficult to increase the tax base rapidly. In the first place,

1/ The tax on gasoline, which yielded 3 million quetzales in 1948/49, is at present classified as a consumption tax, while previously it was classified as an import tax. It has not been possible to make the necessary correction in order to obtain a homogenous series. In the light of this fact it is possible that import and export tax revenues have increased the most.

2/ Although the value and volume of imports remained stable between 1948 and 1949, tax receipts were greater, because private imports increased in comparison with those of the Government, of the United Fruit Company, and other foreign enterprises which are exempt from taxation.

3/ Information obtained from an unpublished report on the fiscal structure of Guatemala, prepared by the Banco de Guatemala in cooperation with the Federal Reserve Bank of New York.

the fact that an important part of the population is not entirely integrated into the monetary economy and that the level of income is generally low makes it almost impossible to levy a personal income tax with a low exemption and high yields and which can be administered economically.^{1/}

Table 5. Guatemala: Sources of Financing the Fiscal Deficit
1946 - 1949

(Thousands of Quetzales)

End of December	Domestic Public Debt		Bank Deposits of the Government and Official Entities b/		Total Increase
	Amount a/	Increase	Amount	Increase	
1946	904	-	6,954	-	-
1947	3,890	2,986	12,146	5,192	- 2,206
1948	4,959	1,069	9,286	- 2,860	3,929
1949	12,672	7,713	7,907	- 1,379	9,092

Source: Bollettins of the Banco de Guatemala.

a/ Excludes the floating debt and covers only those bonds in effective circulation. Includes municipal bonds and those issued by State Banks.

b/ The deposits of official entities have also been included, because a part of the public debt has been contracted to provide capital for these entities.

In the second place, Guatemala maintains commercial agreements which prevent the free manipulation of import duties. The ad-valorem equivalent of import duties, for example, has been declining since 1945.

There are, moreover, contractual agreements which prevent the Government from increasing the taxes on the production and export of bananas (the item of second importance in Guatemalan exports) and which exempt producers from profits taxes.

The inelasticity of the tax base and the lack of a well-developed market for Government bonds has made it necessary to cover deficits with accumulated balances from the Treasury and with loans from the Banco de

^{1/} An income tax was introduced in Congress in 1950, but for the reasons indicated it may be expected to be a secondary source of income. At present there exists an excess profits tax on industry and commerce.

de Guatemala (See Table 6). At the end of 1949, the public, excluding commercial banks, held 65.9 thousand quetzales in Government bonds, and private banks 1.1 million, out of a total of 12.7 million in circulation.

The monetization of the fiscal deficit could have had serious inflationary effects. The increase of 7.7 million quetzales in the debt which took place in 1949 represented 20 per cent of the money in circulation. Nevertheless, since there was a 9.4 million quetzal decline in foreign reserves, the effect of the deficit on the money supply was not felt.

Private Investment

There is no information on the amount of private investment during the period under review. The only type of private investment regarding which it is possible to obtain approximate figures in quantitative terms, is equipment, which is almost entirely imported. Data on construction are only available for Guatemala City.

The current value of capital goods imports increased four times between 1945 and 1948, but there was practically no variation between 1948 and 1949. In terms of constant prices, the total increase in the five years was 127 per cent, and the average annual volume was 23 per cent greater than during the period 1937-39.

The imports which, at constant prices, experienced the largest increases beginning in 1945 were transportation equipment (317 per cent), agricultural machinery and equipment (268 per cent), and industrial machinery and equipment (136 per cent). On the other hand, construction materials declined. Imports of agricultural and transportation equipment increased most in comparison with the periods 1937-39 and 1925-29.

It seems unlikely that annual increases of 53, 92 and 23 per cent in capital goods imports between 1945 and 1948 could have been entirely financed by current voluntary savings. If voluntary private savings had not changed during the whole period 1945-49^{1/}, the national income would have had to increase four times in order for this investment to

^{1/} Although it is possible that the relation between voluntary savings and national income rises in a cyclical upswing, this factor seems to be of secondary importance in view of the marked rise in capital goods imports.

Table 6 Guatemala: Value of Capital Goods Imports
(Thousands of quetzales)

	<u>Current Prices</u>					<u>Constant Prices</u>				
	1945	1946	1947	1948	1949	1945	1946	1947	1948	1949
Total Capital Goods	4504	6914	13213	17399	18090	4504	5928	8872	10190	10221
Industry	1637	2695	5108	7229	7227	1637	2326	3307	4402	3865
Agriculture	316	461	709	1794	1344	316	446	687	1393	1164
Transportation	701	1970	4242	4426	4961	701	1664	3049	2552	2930
Construction	1179	950	1632	1944	2376	1179	696	849	754	903
Others	671	838	1522	2006	2181	671	796	980	1089	1359

Source: Calculated by the United Nations Economic Commission for Latin America, based on official customs statistics.

/have been financed

have been financed entirely from this source.

One of the most important sources of financing imports of equipment was "disharding". In 1945-49 the velocity of circulation of bank deposits, for example, was 80 per cent greater than during the war (1940-44) and 14 per cent higher than during the period 1937-39. To the extent that "disharding" was accompanied by a decline in foreign reserves, the expansionary effects were reduced, but up to 1947 the country continued to accumulate reserves.

Resources of foreign enterprises was also used to finance imports of capital goods. Railroad equipment, for example, which accounts for a third of all transport equipment, was financed with funds of the only existing railroad enterprise. About 40 per cent of the imports of construction materials and about 30 per cent of the imports of agricultural machinery and equipment, were financed by the banana companies. It is probable that at the beginning of the period, capital goods imports financed by foreign companies accounted for 25 per cent of the total, and that at the end of the period this proportion fell to 20 per cent. The resources which these enterprises invested would have remained outside the country if they had not been so used. Their effect on the balance of payments is therefore similar to that of savings in current savings, but with respect to the local expenditures which accompanied these investments they should be considered as a source of expansion.

There are no data on the role of the banking system with regard to financing imports of machinery and equipment. Loans granted by the banks doubled between 1945 and 1949; but if the increase in prices is taken into account, the expansion was 50 per cent. At the end of 1949, loans granted by the banks to industry, mining and transportation reached 3.4 million quetzales, while the c.i.f. value of industrial and transport equipment imports amounted to 12.2 millions. The banking system has not, apparently, contributed an important part of the inflationary financing of the acquisition of equipment. On the other hand, it is possible that bank credit contributed to finance the accumulation of inventories which took place in 1946 and 1947.

In summary, even though it is not possible to arrive at a quantitative estimate, it could be concluded that the most important inflationary source of financing has been dissaving and the domestic expenditures of foreign

/enterprise investments.

enterprise investments.

Investment of private capital in machinery and equipment was also stimulated by the increase in world demand which affected agricultural machinery, construction materials, transport equipment and machinery for the production of bananas and citronella in particular. Imports of equipment for motorized transportation increased as a result of the natural change-over from human and animal means of transport to more efficient and cheaper mechanized methods. This change was no doubt accelerated by the higher salary level. The Government also invested in capital goods, including building equipment and materials and agricultural machinery.

CHAPTER II AGRICULTURAL AND LIVESTOCK PRODUCTION

Three main events characterize agriculture and livestock production during the post-war period: 1) the expansion of new tropical crops following the long-run tendency of Guatemalan agriculture to move from the temperate to the tropical zone; 2) the stagnation of the production of traditional basic products, with the exception of bananas; and 3) the Government's efforts to develop production. In the following paragraphs these events will be discussed in detail.

New Crops

There has been a long-term tendency to move the geographic centre of Guatemalan agriculture from the temperate region to the tropical zones of the country.

At the time of the Spanish occupation, the indigenous population concentrated its activities in the temperate region. The conquerors endeavoured to move the centre of production toward the tropics in order to develop indigo production, but met without permanent success. Later the development of coffee production brought the subtropical zone under cultivation and the introduction of banana cultivation on a commercial scale at the beginning of the century, extended the agriculture of Guatemala to the tropics.

The development of the tropical regions of the country was dependent on exports. Sugar, which is today only consumed domestically, developed under the stimulus of world demand. The tropical areas are now directly supplying domestic needs to a great extent and the tropical production of corn, cotton and oil seeds is being encouraged.

The movement toward the tropics was also influenced by the fact that the temperate zone is over-populated and is suffering from erosion. The temperate region can probably continue to grow only if intensive
/agriculture is developed.

is developed. Intensification requires technical research, enterprise and capital, and a different system of land tenure than that prevailing today. The tropical region can be developed without so much prior research, and agriculture in this area is not complicated by the "minifundio" problems.

The displacement of production towards the tropics may have important consequences. The soil of the tropical southern coast of Guatemala, the area which has developed most rapidly, is of much better quality than that of the temperate zone, and the topography of this region makes it suitable for mechanization. There are therefore opportunities for a more commercialized, mechanized and intensive system, which is necessary in tropical agriculture.

The production of tropical crops has increased considerably since 1945. They include bananas, oil grasses, abaca, cotton and oil seeds. All of these products except bananas have recently been introduced into Guatemalan agriculture.

Oil Grasses

Two oil grasses, citronella and lemon grass, are the raw materials for essential oils utilized in the perfumery and pharmacy industries.

Cultivation on a commercial scale started in the middle of the 'thirties, but the greatest expansion has taken place during the post-war years. From 1935-40 to 1941-45 exports increased 45 per cent, while between 1941-45 and 1949 they increased 240 per cent. It is estimated that there are 5,400 hectares under cultivation, in comparison with approximately 500 before the war. Total investments in plantations and equipment amount to approximately 4.1 million quetzales.

Table 7. Guatemala: Development of the Essential Oil Industry

	<u>New Plantations</u> Hectares	<u>New mills installed</u>		<u>Average Annual Exports</u>	
		Value in Quetz.	Number	Metric quintals	FOB value in thousands of quetzals.
1935-40	405	190,000	2	963	60.8
1941-45	360	130,000	3	1,400	151.2
1946-48	2,700	760,000	26	2,274	395.3
1949	450	240,000	11	4,728	1,083.6
1950	1,485	185,000	9	5,520 ^{a/}	

Source: Data supplied by the Banco de Guatemala and by the bulletins of the Dirección General de Estadística.

^{a/} Estimate based on exports from January to September.

/This industry has

This industry has developed in the central sector of the Pacific Coast. The available area in the region is sufficient to enable the cultivation of citronella and lemon grass to be doubled if there were a market for the product.

The United States is the main market for Guatemala's essential oils, as the European countries are supplied by their colonies. Total citronella imports by the United States increased from 3,773 metric quintals in 1946 to 8,327 in 1949. Guatemala provided 35 per cent of these purchases in 1946 and 37 per cent in 1949. Before the war the Asiatic countries supplied most of the American market, but in 1949 they supplied only 46 per cent, Formosa being the principal exporter after Guatemala.

United States imports of lemon grass fell from 4,173 metric quintals in 1946 to 2,859 in 1949, India being the principal loser as regards the export market. Guatemala, which is the second largest exporter, increased its exports by approximately 8 per cent, from 495 to 532 quintals.

Trade figures suggest that the market is limited. The long-term effect on Guatemala might be serious if Western Java, where the area sown was reduced from 7,000 before the war to 1,000 hectares after the war, and Ceylon, where a considerable reduction also took place, were to revive their lemon grass industry. The present market situation is good however and conditions do not justify the fear of immediate strong competition. Prices dropped from 4 dollars per pound c.i.f. American port in 1946 to 1.16 dollars in 1949, but rose again in 1950.

These facts stress the need for studying the absorption capacity of the markets, the possibilities of cutting costs in order to increase the yield per hectare, and the proportion of oil extracted. The appearance in 1949 of a disease affecting the leaves may seriously injure the yield. On the other hand, a paper factory which uses the residue of oil extraction was established in 1949 and it may help to improve the competitive position of the Guatemalan product.

Table 8. Guatemala: Exports to the U.S.A. of Citronella and Lemon Grass
1946-49

(Metric quintals)

Citronella

	Total	Guatemala	Ceylon	China	Dutch Indies	Others
1946	3,773	1,437	1,305	-	386	645
1947	6,095	1,141	2,995	169	1,822	568
1948	7,786	2,945	1,604	363	2,524	350
1949	8,327	3,077	1,332	2,459	18	1,441

Lemon Grass

	Total	Guatemala	India	Others
1946	4,173	495	3,292	386
1947	2,854	591	1,877	386
1948	2,281	645	936	700
1949	2,859	532	1,909	418

Source: United States imports by country of origin and by product.
United States Department of Commerce

Manila Hemp.

World production of Manila hemp before the war amounted to almost half a million metric tons of which 98 per cent was produced by the Philippines and 2 per cent by the Dutch Indies.

The Japanese occupation of those countries compelled the United States to look for new sources of supply, and Costa Rica, Guatemala and Honduras were encouraged to cultivate this product on the basis of an experimental plantation which existed in Panama. As a result, Central American countries provided in 1945-48 17 per cent of the greatly diminished world production.^{1/}

The area sown in Guatemala in 1942 was 2,150 hectares. Here, as in other Central American countries, plantations were soon developed intensely and this early exploitation reduced their growth and yield. Moreover, plantations were ravaged by disease. These problems have

^{1/} The principal source of this data is the Panamerican Union report Economic Survey of Inter-American Agriculture, Vol. I, 1949, p.127-135.

/gradually been

gradually been solved and in 1948 it was possible to export 4,616 metric tons of fibre in comparison to 1,406 tons in 1946.

Due to the difficulties experienced by the Philippines in reestablishing production, and to world recovery and rearmament programmes, unit export prices of the fibre increased more than 170 per cent between 1946 and 1949. This increase in price and volume exported, placed Manila hemp in the third place in importance among Guatemalan exports in 1949.

In 1950 the United States government again showed interest in expanding cultivation and recommended that production should be doubled. Technically, it is doubtful if Central America can compete with the Philippines, where labour costs are extremely low. The increased use of machinery and improvement in the quality of the fibre may, however, enable Central America to reduce costs to competitive levels.

Oil Seeds.

Guatemala has for some time now been trying, with some success, to supply a higher proportion of its consumption of oils and edible fats from domestic production.

Imports of edible oils have practically disappeared. The 384 metric tons of unrefined oils imported yearly during the 1937-39 period decreased to 14 tons in 1945-48. On the other hand, imports of lard, though almost 35 per cent higher than in 1937-39, are much lower than during 1925-29. Guatemala at present supplies approximately 60 per cent of its consumption of oils and lard.

Domestic supplies of oil and lard in 1949 were estimated at 8,674 tons, in oil equivalent, of which 1,293 tons were of vegetable origin.

Table 9. Guatemala: Apparent Supplies of Domestic Lards and Oils, 1949.
(In metric tons)

Source	Unprocessed	Oil Equivalent
Sesame	1,339	616
Cotton	1,578	213
Corozo	714	464
Tallow	3,453	3,453
Lard	3,687	3,687
Butter	268	241
Total	-	8,674

Source: United States Department of Agriculture, Foreign Crops and Markets, Vol. 60, No. 22, May 1950, Pg. 543.

/In 1949 imports

In 1949 imports of oil and lard increased greatly in relation to the preceding years, imports of lard being six times higher than the average for the five preceding years. This rise in imports was due to a fall in prices in the international market, which enabled importers to sell United States lard at prices 3 to 4 cents lower than lard of domestic production.

Guatemala may in the next three to five years reach a volume of oil seed production higher than its present consumption. The programme of the expansion of the cotton area will provide a substantial part of this increment. In addition the United Fruit Company has planted approximately 650 hectares of African palms, which began to produce commercially in 1950, though the equipment for oil extraction has not yet been installed. Guatemala's "corozo" plantations on the Atlantic coast are just beginning to be exploited.

According to a report of the Instituto de Fomento de la Producción^{1/} there are about 500 million trees in the country, 86 million of which are in the Izabal region, which is easily accessible and where exploitation is most active. Only about 77 thousand of these trees are at present exploited.

The yield of almonds is estimated at 9 kilogrammes a year per tree, and the oil yield, using modern extraction methods, could be brought up to 65 per cent of the total weight, or about 5.8 kilogrammes of oil per tree. The potential oil production capacity of the region could therefore be estimated at 450,000 metric tons a year.

The greater part of the "corozo" almond crop is at present gathered and crushed by hand. Oil extraction by hand processing requires seven man-days per metric quintal of almonds. A Guatemalan industrialist has recently invented a machine which, operated by one man, can process 11 metric quintals of almonds per day. A small plant, financed by the Instituto de Fomento, is operating in the producing region.

^{1/} Juan Rothe F. Contribución al Estudio del corozo en Guatemala; Instituto de Fomento de la Producción (mimeographed), March 1950.

Cotton.

Cotton is not a new crop in Guatemala. Its cultivation was more important in the 'twenties than in the following years until 1948, when important commercial plantations were started.

The Government has since 1946 encouraged cotton production by the loan of state owned agricultural machinery and by granting credit facilities. In 1948 1,300 hectares of cotton were cultivated by mechanized methods.

In 1949 the Instituto de Fomento de la Producción sowed 600 hectares of cotton in cooperation with a Venezuelan entrepreneur. In spite of adverse weather conditions which affected the region, about 3,200 metric quintals of ginned cotton were produced at costs which, without doubt, will encourage further plantings.

Guatemala's total annual imports of cotton, amounting to 45,000 quintals, including raw cotton, yarn, textiles and finished goods, could be supplied by the output of 10,000 hectares.

Technicians agree that there is enough land in the country to more than supply actual cotton requirements, and it has even been considered possible to produce long fibre cotton for export in certain irrigated regions of the country.^{1/}

The Instituto de Fomento estimates that the 1950-51 harvest will supply 50 per cent of the ginned cotton requirements of the country in comparison with the 6 per cent which was supplied by domestic production before the institution of the development campaign.^{2/} The replacement of imported by domestically-produced ginned cotton will represent a saving to the country of approximately one million dollars a year in foreign exchange.

Other New Crops.

The United States Department of Agriculture encouraged the production of rubber, cardamomum and cinchona during the war.

Production of cardamomum and cinchona has not progressed very rapidly. In 1948 exports of the former reached 57 metric tons and of the latter 130 tons. Rubber plantations cover an area of 750 hectares,

^{1/} N.K.Ovalle, Industrial Report of Guatemala, Inter-American Development Commission, Washington D.C., 1948 (mimeographed).

^{2/} Monitor del INPOP, Nos. 1 and 2, 1950, p. 10.

and it is estimated that the first commercial crop in 1950 produced more than 100 metric quintals.

Traditional Crops

The most important traditional agricultural and livestock activities in Guatemala have for many years been coffee, bananas, corn, beans and the breeding and fattening of cattle. In spite of the lack of statistical information, it can be said that, with the exception of bananas, the volume of production of these traditional activities has not increased significantly during the postwar years.

Coffee.

The volume of production and export of coffee has not varied since 1945, and has shown no particular long-run tendency. In comparison with the pre-war years (1937-39 average), exports have increased approximately 12 per cent, which is slightly lower than the increase shown during the same period by the other countries exporting soft coffee from the Continent.^{1/}

Nevertheless, during the post-war period, due to the marked increases in prices from 1945 to 1947 and then from 1949 to the beginning of 1950, foreign exchange earned by coffee exports increased almost three times.^{2/}

Table 10. Guatemala: Volume and Unit Price of Coffee Exports, 1945-50.

	<u>Value at Current prices</u>	<u>Volume</u>	<u>Index of unit value</u>
	1,000 quetzals	1,000 metric quintals	1945 = 100
1945	17,716	536.8	100
1946	24,573	497.3	124
1947	32,589	558.0	173
1948	30,916	485.3	192
1949	37,353	548.3	207

Source: Customs statistics.

^{1/} Including Colombia, Costa Rica, El Salvador, Haiti, Mexico, Nicaragua and the Dominican Republic.

^{2/} Guatemala did not profit entirely from the 1949 increase in prices, because a great part of the harvest was sold before the price rise.

/During the period

During the period under review, production costs of coffee seem to have increased substantially. In fact, money wages in the coffee industry increased between 66 and 133 per cent from 1945 to 1950, and the price of corn, which constitutes an important part of wages in kind, increased by 68 per cent. Moreover, at the end of 1950 the Government increased the export tax from 1.50 quetzales per quintal (of 46 kilogrammes) to 5.86 quetzales, which, at the price of coffee prevailing during the last months of 1950, represented an ad valorem equivalent of about 11 per cent.^{1/}

On the average, the price of coffee (unit export value) in 1950 was about 10 quetzales per quintal (of 46 kilogrammes) greater than in 1949. This increase represented a rise of 175 per cent over the 1945 price and approximately a 10 million quetzal increase in income for Guatemala.

Even taking into consideration the increase in costs and taxes, the coffee industry is now more profitable than it was five years ago. Thanks to this, the industry has been able to pay off a great part of its debts, and apparently it is directing more funds to the improvement of yields but not to the increasing of plantings.^{2/}

About 25 per cent of the coffee exported was produced by the Government on farms confiscated from German citizens during the war, and afterwards expropriated. This change in ownership, in addition to its effects on Government income, has increased the country's capacity to import resulting from coffee exports.

Bananas

The volume of banana exports has fluctuated violently during the last five years. From 1945, the year of recovery to the pre-war level, until 1947, the increase was 50 per cent. In the following years exports began to fall, due to weather conditions and labour difficulties.

^{1/} It is estimated by producers that the cost of coffee production fluctuates around 20 quetzales per quintal of 46 kilogrammes. The price received by the farmer of approximately 35 quetzales per quintal of unprocessed coffee, at the farm, represents a tax of 39 per cent on gross profits of the coffee growers, a rate which is higher than the average paid by commerce and industry through the excess profits tax.

^{2/} Foreign Commerce Weekly, December 25, 1950, page 15.

Table 11. Guatemala: Value, Volume and Unit Price of Banana Exports
1945-1950

	<u>Value at current</u> <u>prices a/</u> thousands of quetzales	<u>Volume</u> thousands of metric quintals	<u>Unit Value</u> 1945 - 100
1945	13,080	193.8	100
1946	19,177	221.2	129
1947	30,790	290.9	157
1948	31,510	273.4	171
1949	17,966	157.1	169

Source: Customs statistics.

a/ Corrected values according to calculations of the Balance of Payments.

Banana prices also increased so rapidly that the value of exports of this product in 1948 exceeded the value of coffee exports.

In the period 1934-1938, world imports of bananas rose to 2.4 million metric tons a year, of which 1.3 million were purchased by the United States. In 1945, due to transportation difficulties and the economic situation in Europe, world imports amounted to 1.2 million tons, of which the United States imported 930,000. In 1947, world banana imports had not yet recovered to the pre-war level but the United States was importing slightly more.^{1/} Perhaps the most significant fact in the development of the banana trade is that United States imports are actually lower than in 1929, in spite of the marked increase in United States national income and the increase in the population.

The relative importance of bananas in Guatemalan trade was greater in the post-war period than before the war. The 85 per cent of the volume of banana exports is accounted for by foreign companies and therefore an important part of the capacity to import thus generated is not at the free disposition of the economy of the country. It is estimated, for example, that in 1947 and 1948 the profits of foreign investments in the banana industry reached 13.0 and 13.5 millions of quetzales respectively,^{2/} or about 40 per cent of the export value of this product.

Nevertheless, it is probable that the real cost of production of bananas, in terms of the country's resources, is less than the real cost

^{1/} Food & Agriculture Organization: Yearbook of Food and Agricultural Statistics, Vol. II - Trade Commerce, 1948, page 85, Washington, D.C. 1949.

^{2/} International Monetary Fund: Balance of Payments Yearbook 1948 and Preliminary 1949, Washington, D.C. 1950

of each dollar obtained from the export of other products, especially coffee. These factors, together with the nationalization of the German coffee plantations, should be considered when interpreting the changes in the country's capacity to import.

There are indications that the position of Guatemala with respect to the world market has deteriorated. A series of weather accidents and diseases have so seriously damaged production on the Atlantic Coast that producers announced their intention of abandoning their crops, a measure which was not finally adopted. In addition, the powerful workers' unions have increased the costs of production probably at a faster rate than in other producing areas. These factors have induced the large companies to encourage banana production by Guatemalan farmers, limiting their own activities to marketing the product. The Guatemalan banana industry will be faced with competition from Honduras, where heavy investment has taken place in the rehabilitation of plantations which were affected by the Panama disease.

Chicle

The volume of chicle exports increased rapidly since 1945, but began to fall in 1948. By 1950 exports were only two-fifths of the 1945 level and their value slightly more than half.

Table 12 Guatemala: Value, Volume and Unit Prices of Chicle Exports
1945-1949

	<u>Value in current prices</u> Thous. of quetzales	<u>Volume</u> Thous. of metric quintals	<u>Unit Value</u> 1945 = 100
1945	2,553	18.4	100
1946	3,076	17.9	124
1947	3,967	22.5	127
1948	2,841	17.0	121
1949	1,366	12.0	79

Source: Customs statistics.

One of the reasons for the fall in demand for chicle in the United States, which is the principal buying market, lay in the fact that companies had previously accumulated large stocks. Other reasons were the competition from synthetic chicle and from "jelotung" supplied by the Asiatic countries.

In addition to the factors affecting demand, Mexico and Guatemala

measure caused the two principal purchasing companies which financed chicle operations to withdraw from the country,^{1/} a move which seriously affected production in 1950.

Corn

Corn occupies the third place in Guatemalan agriculture, after coffee and bananas.

According to official figures, which in many circles are considered deficient, the corn harvest declined by 33 per cent between 1946-47 and 1947-48. Unofficial estimates indicate a further reduction in the harvest of 1948-49 of 5 per cent below 1947-48. These figures and the fact that corn prices were higher than those of any other food crop, and that imports increased over the pre-war level, indicate that the level of production in the 1945-1949 period was below normal.

Beans

There is no reliable information on the volume and changes in the production of beans. According to an unofficial source, 1949 output was 455,000 quintals, which was approximately equal to that of 1948, 8 per cent lower than the 1940-1944 average, and 70 per cent above the average for 1933-1939.^{2/}

Livestock Production

Changes in livestock production, must also be judged indirectly. Cattle slaughtering increased 16 per cent between 1945 and 1949 and was, on the average, 17 per cent greater than before the war. The slaughtering of other animals, mainly hogs, was 26 per cent greater in 1949 than in 1945 and 28 per cent above the pre-war period. The increase in cattle slaughtering was in part due to the increase in the number of cattle on the hoof imported for fattening in the country. Thus, cattle stocks have increased only slightly during the post-war years. In the case of hogs there have been no imports, and slaughtering in 1947 was equal to 60 per cent of hog numbers, a figure which must be slightly greater than their natural increase. In summary, Guatemala increased its per capita consumption of beef

1/ U.S. Department of Commerce: Economic Review of Guatemala, 1949, International Defence Service, Vol.VII, No.37, June 1950

2/ United States Department of Agriculture: Foreign Crops and Markets, Vol.60, No.22, May 1950, page 535.

especially by imports and per capita consumption of pork by means of the natural increase of hog numbers.

Total Volume of Agricultural and Livestock Production

Changes in the volume of production of various important products have been discussed. In order to estimate the total volume of agricultural and livestock production, it would be necessary to compile a representative index. In spite of the lack of information, a partial index has been compiled which gives an approximate idea of the magnitude and direction of the changes which have taken place.

The volume of production of goods included in the index had reached a post-war maximum in 1947 only to fall below the 1945 level in 1949. Coffee and bananas represent 84 per cent of the index, the fluctuations of which naturally follow these two products. The differences in production volume would probably be less severe in a more comprehensive index.

Table 13 Guatemala: Partial index of the Volume of Agricultural
Production a/

	1945 = 100			
	1946	1947	1948	1949
Coffee b/	97	98	94	104
Banana c/	114	149	141	92
Oil Grasses c/	98	90	263	403
Manila Hemp d/	100	210	328	278
Wheat e/	112	100	110	110 h/
Rice f/	102	108	111	111 h/
Sugar Cane g/	88	107	108	108 h/
Total	102	110	108	98

- a/ The weights are based on the percentages of the value of the group in 1948. The figures correspond to the agricultural years ending with the calendar years indicated.
- b/ Controlled production.
- c/ Volume of exports.
- d/ United States imports of Manila Hemp from Guatemala.
- e/ Production estimates of the Instituto de Fomento de la Producción.
- f/ Estimates based on official figures and on a report by Graham S. Quate reproduced in mimeograph form by the Instituto de Fomento de la Producción, June 1949.
- g/ Based on official figures for the production of white and brown (panela) sugar.
- h/ Production of the preceding year.

Possible Causes of the Stagnation of Agriculture and Livestock Production

Under the conditions of full-employment which obtained in Guatemala during the post-war years, the general level of agricultural and livestock production could only have increased given favourable climatic conditions and the introduction of significant technical improvements, or such a high level of profit as to enable these activities to compete with others for the available factors of production. None of these conditions prevailed.

Climatic conditions were unfavourable, especially during 1949 and 1950. In the middle of 1949 a severe drought affected the North and East regions of the country, and by the end of September the Southern region was ravaged by great storms. The drought affected the corn crop of the temperate region as well as the tobacco and abaca crops, and the storms damaged the banana crops especially.^{1/}

There have been no improvements of any importance in production methods, though the volume of imports of fertilizers increased to an annual average of 6,000 tons, compared with 2,200 annual tons imported during the years 1937 to 1939. A great part of the imported fertilizers is utilized in the cultivation of coffee; but total imports, even during the post-war period, have been so small that the increase could not have had a significant effect on yields.

The use of improved seeds is still in the experimental stage.

On the other hand, important steps have been taken in regard to agricultural machinery. Between 1945 and 1949, 643 tractors were imported from the United States, of which probably more than 90 per cent were for agricultural purposes. In the whole period 1925-1944, 331 units were imported from the United States.

The volume of imports of machinery and agricultural implements of all kinds quadrupled between 1945 and 1949 and, on an average, it was three times the volume imported between 1937 and 1939.

The composition of imports has also changed. Before the war, approximately 66 per cent of the total value, at constant prices, was made up of tools, while in the post-war years these represented only 43 per cent.

^{1/} United States Department of Commerce: Economic Review of Guatemala 1949. International Reference Service, Vol. VII, June 1950.

The greater part of agricultural machinery imported was intended for use in farms in the tropical zone, especially for banana farms. One of the banana companies owned 200 tractors in 1948.^{1/} It is probable that another important part may have been absorbed in the production of citronella.

The use of machinery has also been encouraged by the Government. The Ministry of Agriculture established a machinery station with eight tractors in the wheat region of the country and the Instituto de Fomento has established on the Pacific coast the first of a series of stations with 14 tractors.

Table 14. Guatemala: Imports of Agricultural Machinery from the United States
1945 - 1949
(in units)

Average	1937/39	1945	1946	1947	1948	1949
Tractors	29	134	151	197	87	74
Mowers	3	5	10	3	1	1
Hayrakes	54	1	21	341	131	71
Harrowes	-	1	2	3	-	5
Harvesters	-	5	-	-	3	6
Maize threshers	12	-	138	90	94	134
Ploughs	118	167	235	354	724	198
Rakes	6	3	18	41	46	60
Cultivators	26	52	66	88	147	21
Planters	2	-	5	26	43	10
Seeders	-	-	18	3	4	7

Source: Foreign Commerce and Navigation of the United States.

In spite of the progress already made, Guatemala has only reached the first stages of agricultural mechanization. No doubt the increase in production in the tropical zone, where the topography of the land is suitable, has been largely due to the progress of mechanization.

It is doubtful if the profitability of agriculture has stimulated expansion. Profits in the coffee industry improved notably after 1945, but this rise was not reflected in an increase in the rate of plantings. The increase in prices which took place between 1945 and 1947 was

^{1/} This company is also an important producer of corn and cattle, on a farm with an area of about 104,000 hectares.

interpreted by coffee producers as a short-term occurrence which consequently did not justify an increase in plantings. This attitude may have changed in 1950.

It is considered by the Asociación General de Agricultores^{1/} that the causes for the reduction in corn production have been the following: 1) the increase in wages, which has cut profits of the large producers, except in the case of mechanized production, and has induced farm hands to work longer hours as wage earners rather than to produce their own corn; 2) the emigration of rural labourers toward the urban centres; 3) labour difficulties; 4) the fall in yields due to the lack of rotation and fertilizers, and 5) the losses occasioned by the lack of storage facilities.

Rotation, fertilizers and storage have only long-term effects, and since the situation with regard to these factors has not changed markedly, they cannot be considered as important factors in the trend of corn production in the last few years.

One of the most important factors in reducing corn production may have been the greater increase in the price of labour than in the price of corn. The wholesale price of corn increased 68 per cent between 1945 and 1949, while agricultural wages increased approximately 100 per cent. Considering the high labour requirements to produce a quintal of corn and the shortage of labourers, it stands to reason that corn production may have ceased to be profitable for the large non-mechanized producers and that these factors may have encouraged farm hands to buy corn in the market rather than to produce their own.

Similar conditions apply to beans. As far as beef production is concerned, the Government has followed a policy of stable prices. The price of beef in Guatemala increased only about 22 per cent between 1945 and 1949, while the unit import value fell between 1945 and 1948. It increased again in 1949 more than the retail price of meat. For this reason, the major part of the increase in consumption has been supplied by imports of cattle on the hoof.

The common factor in all three cases is the increase of costs over

^{1/} Bulletin of the Asociación General de Agricultores No.266, May 20, 1950, The disequilibrium between Production and Consumption of Maize.

prices.^{1/} It should not be concluded from this that a policy of high agricultural profits would be sufficient to increase production. A policy of remunerative prices might result in an increase in the real income of the farmers; but, given full employment in agriculture and the difficulty of transferring resources from non-agricultural to agricultural activities, it is doubtful if it would result in an increase in the level of agricultural production as a whole, unless technical improvements were introduced, though such a policy might stimulate the production of certain individual crops.

Efforts to Develop Production

Since 1945, the Government of Guatemala has shown great interest in the development of agricultural and livestock production. With this purpose in mind it has used almost all known instruments, including agricultural research, surveys of resources, the establishment of special technical services, credit, customs protection and the fixing of remunerative prices.

Before 1945, Guatemala had not given much attention to research as a means of developing agricultural and livestock production. Today there are three experimental stations carrying out several programmes with specific practical goals. One with a very small budget, has specialized in the search for improved varieties of wheat; another, which was organized with the technical and financial co-operation of the United States Government, is carrying out research in coffee, animal nutrition, varieties of cereal seeds, fertilizers, pesticides and weed-killers, in addition to other activities.

The coffee programme has already achieved definite results. It is definitely known that it is possible to increase yields through the selections of seeds and by reducing the distance between plants. In this way yields can be increased by more than 200 per cent.^{2/}

^{1/} As in the case of coffee, producers did not believe that price increases would last.

^{2/} The Instituto Agropecuario (Agricultural and Livestock Institute) estimates that the average yield per hectare is today about 450 kilogrammes and could be increased to 1,440 if the distance between plants were reduced and selected seed used. This would increase the production per tree from two to four times the actual average yields. See "Instituto Agropecuario Nacional" - "Dos métodos prácticos para aumentar la producción de café", Circular de Divulgación, No.2", June 1950.

Investigations on animal nutrition have been carried out on food rations for fowls, cattle and hogs. As a result of these investigations, it has been established that in grass of the desmodium species, "which is as good or better than alfalfa",^{1/} the country has an efficient source of protein for the livestock industry. It was also found that bananas can be used successfully as substitutes for corn in the fattening of hogs.

The third experimental station, called the Tropical Research Centre, is an organization belonging to the University of Iowa. This station was established in Guatemala to do research on corn which could be useful in the United States. In 1950, the "Instituto de Fomento de la Producción" signed an agreement with the Tropical Research Centre covering a co-operative research programme on corn, beans, potatoes and other food crops. With this technical assistance the "Instituto de Fomento" has recently established a farm to produce improved corn seeds.

Important steps have been taken concerning the study of resources. The lack of knowledge of existing physical resources was one of the most serious obstacles encountered by the "Instituto de Fomento" in its first year of work. To overcome this difficulty and with the co-operation of the Food and Agriculture Organization, the Inter-American Institute of Agriculture and the "Instituto Agropecuario Nacional" a topographical survey has been started (25,280 square kilometres have already been covered in a preliminary fashion),^{2/} and forage resources of the Southern Coast and oil seeds and forest resources have been studied.

Technical assistance to farmers has included a veterinary service with a staff of eleven Colombian veterinarians who, together with Guatemalan experts, are doing successful work in the struggle against disease and in the improvement of the technical education of the farmers.

Agricultural extension work is being expanded to other fields of rural industries, but the scarcity of experts acquainted with the environment and the lack of experimental work to support technical recommendations have been obstacles to further development.

1/ Monitor del INFOP, Nos. 1 and 2, 1950, page 3.

2/ Monitor del INFOP, Nos. 1 and 2.

During 1950, the organization of a service for the storage of grain was started. The first step in its organization will be the building of a silo in the capital with an 18,000 ton capacity. The objective of this service is not only grain conservation; it is hoped that it can also be used in a programme to stabilize agricultural prices.

Agricultural credit has shared in the stimulus given to credit activities by the monetary and banking reform of 1945. The creation of the Instituto de Fomento de la Producción has been the most important measure taken since 1945 for the purpose of modifying the traditional trend of credit and the strongly rooted practices in the administration of agricultural credit. Before its inception it was practically impossible to obtain credit for agriculture on the favourable terms this institution grants today. Bank decentralization has been instituted, and the practice of granting equipment credits on annual crops up to 50 per cent of their initial value has been introduced. In this way the small farmer is able to obtain bank credit through the Institute's agencies in towns near his homestead.

The volumen of credits granted by the Instituto de Fomento is still small in relation to the total credits of the banking system. The most important aspect of the credit policy of the Instituto de Fomento has been the break from the traditional direction of loans.

The Agricultural Frontier and the Land Problem

Guatemala is seriously concerned with the problem of the landless farmer, which was presented in general terms in the Report on Economic Development of Guatemala. This anxiety has led to several legal proposals regarding experiments in collective farming and efforts to incorporate new areas into cultivation.

One of the legal proposals contains the following essential points:

- a) All property classified as a "latifundio", be it public or private, will be divided by the State or by its owners, except for plots of from 45 to 225.6 hectares in area. It is proposed that the maximum area to be owned by one farmer be limited to 5 "caballerías" (approximately 225.6 hectares), except in the case of indivisible economic units. Economic units are those in which sugar cane, bananas, coffee, cotton and all other products for industrial processing are cultivated and those

/units in which,

units in which, due to capital, techniques and farming methods, there might be a fall in yield as a result of the division. Areas used for cattle breeding of a size considered necessary by the State are also defined as economic units.

b) Owners of "latifundios" who give up all forms of serfdom that affect workers, modernize their production techniques and increase yields, and are prepared to invest a minimum capital, fixed by the State, will not be obliged to divide their land.

c) The size of the plots is fixed between a minimum of 5 hectares and a maximum of 15, and persons who are dependent on a "latifundio" will have preference in the distribution of the land, followed by those who request land and are in a position to finance and farm the land themselves. The Government will fix the price of the plot and determine the terms of payment.

d) Public lands will be established to which all municipalities, villages and settlements will be entitled.

e) The existence of common lands is guaranteed.

f) Credit, technical and administrative services are provided to put the law into effect. At present the Ministry of Agriculture is studying a more integrated plan for agricultural reform.

Insofar as collective farming is concerned, two experiments have been carried out, but only one is operating and making progress.

The Government has shown great interest in utilising the large territory of Petén. With this purpose it established an agricultural colony and established a self-sufficient settlement in the jungle, building a highway which gives it access to a river port near the Caribbean Sea. This is the first penetration highway to be established in that territory.

The agricultural experiences of the colony on Petén have proved that the locality is suitable for the production of the majority of semitropical and tropical products, and it may become important as a centre for cattle breeding and logging.

CHAPTER III INDUSTRY, TRANSPORT AND ENERGY

Introduction

On the basis of its contribution to national income and the number of people employed, manufacturing does not rank among the most important economic activities in Guatemala.

According to the Industrial Census of 1946, the first of its kind in Guatemala, of a total of more than 950,000 gainfully employed persons, 23,914 worked in industrial establishments employing five or more labourers. The gross value of industrial production was 43.6 million quetzales, compared to a value of 51.5 million quetzales for total exports in this year.

It would appear that the 1946 level of industrial production was considerably higher than that of 1945, the increase being approximately 24 per cent, according to the available data. This extraordinary expansion can be ascribed to the abnormal conditions of supply of equipment and raw materials in 1945. During the war, the level of imports of industrial equipment was very low, but between 1945 and 1946 it increased 42 per cent.

Since 1946, although the volume of industrial production has continued to increase, its rate of expansion has been about 2.5 per cent per annum, the same rate which prevailed between 1925/29 and 1945/48.

Industrial services, such as transport and energy (not included in the preceding estimates), also expanded at a considerably high rate. This expansion, in fact, is one of the most important developments which have taken place in Guatemala since the war.

It was impossible to include several of the new industries which have developed in Guatemala since 1945 in the industrial production indices used in this study.

Table 15. Guatemala: Gross Value of Production and Number of Employees in Establishments with Five or More Employees, 1946 ^{a/}

Industry	Value of Production (Thousands of quetzales)	Number of Employees
Foodstuffs	9,647.8	4,084
Beverages and distilleries	10,254.5	2,033
Tobacco	3,620.1	994
Textiles	5,427.4	4,299
Clothing	3,732.8	2,992
Chemical products	1,716.8	711
Wood	1,759.9	1,955
Building materials	1,910.6	1,534
Electricity and water	1,642.4	761
Printing and engraving	1,111.1	815
Others	2,763.6	2,244
Total	43,587.2	23,914

Source: Industrial Census, 1946.

^{a/} The data contained in this table must be treated with reserve. The real value of production of foodstuffs, for instance, is much higher than that indicated in the census. It is therefore likely that other items contained herein are similarly under-estimated.

/One of the most

One of the most important new industries is the production of edible vegetable oils. As was said before, the development of this industry has enabled domestic production to supply a large proportion of domestic consumption. In fact, this proportion will undoubtedly increase as a result of the establishment in 1949 of a large new factory for the manufacture of processed oils. The capital invested in this venture amounts to half a million quetzales.

The manufacture of plastics, wrapping paper and hard-wood plywoods was also begun in 1949. The production of plastic-ware is small, but of considerable interest, in view of the fact that these goods are competing successfully in Central American markets. The capacity of the paper factory is much larger than is necessary to meet local demand, but an attempt is being made to enter the Central American market for this product too.

The most interesting prospects for new industrial development in Guatemala are for the manufacture of hard-wood plywood. Consumption of this product is increasing in the United States as a result of new architectural trends. Guatemala has large resources of mahogany and other similar species, which seem to justify the optimism regarding the development of the industry.

One of the most interesting features of the production indices is the fact that, on the whole, industries which were not subjected to sharp competition from imported products, such as foodstuffs, beverages and tobacco, developed more rapidly than others, such as textiles, yarn and clothing, which were affected in varying degrees by world market conditions.

The production of manufactured foodstuffs increased by 23 per cent between 1945 and 1946, and 16 per cent between 1946 and 1949. However a large part of this increase is represented by bread baking and similar activities of an artisan nature. The consumption of wheat appears to have increased from 27,000 tons in 1945 to 40,000 tons in 1949, but since nearly all this increment in consumption was covered by flour imports, there was little expansion in the flour milling industry. The expansion of the bakeries fixed the rate of increase of the index.

Table 16. Guatemala: Indices of Industrial Production^{a/}
1946 = 100

Industry	1947	1948	1949
<u>Total</u>	<u>102.5</u>	<u>108.7</u>	<u>111.0</u>
Foodstuffs	100.7	110.1	116.0
Beverages	116.2	119.2	118.7
Tobacco	102.9	122.5	128.6
Textiles	97.0	96.6	85.0
Clothes	83.5	92.2	104.9
Hides and skins	97.4	108.6	104.7
Printing and engraving	69.0	139.1	128.2
Chemical products	97.6	91.7	140.6
Wood	112.3	96.3	96.3
Non-metallic ores	101.6	114.1	129.5
Metals	109.2	83.5	83.5

Source: Prepared by the Economic Commission for Latin America.

a/ The indices shown above are not similar to those published in the July, 1950 Bulletin of the Bank of Guatemala, because the methods of weighting are different. The weighting of the official indices seems very high for beverages and very low for foodstuffs and textiles. The system of weighting used herein is based on the data supplied by the Industrial Census of 1946 with some changes. In some cases (foodstuffs, beverages, textiles and non-metallic ores, for example) the basis of the estimate was different from that of the official indices, but elsewhere the same basis has been used in both cases. The figures for 1949 were calculated on the basis of the percentage changes between 1948 and 1949 indicated by the official indices.

The method of calculation is also different from that used for the indices contained in the report on economic development. In the latter case it was necessary to use other indicators of industrial development because the complete series used in this case did not exist. For instance, in the indices of the development study, imports of hops were used to show the production of beer. Moreover, the new index includes a larger number of industries.

/No significant

No significant developments were noted in the production of alcoholic beverages. Production of spirits and beer increased at a greater rate than the manufacture of pure aguardiente. This trend existed before the war and has continued since 1945.

Production of cotton yarns and textiles, after rising sharply in 1946,^{1/} remained at a high level in 1947 and 1948, and dropped somewhat in 1949. During 1949 the production of rayon materials also decreased, from 402,000 metres in 1948 to 306,000 metres in 1949.^{2/} It was not until about the end of 1949 that the clothing industry also showed the effects of strong foreign competition.

When the crisis first affected these industries, their leaders sought an increase of the customs duties, which were already high. Their request led to the introduction of a bill which was approved by the Guatemalan Congress but vetoed by the President. Later additional customs protection was extended to certain branches of the textile industry. In June 1950, for instance, imports of rayon and cotton socks and stockings were suspended, and earlier the duties on goods made in Japan were doubled.^{3/}

The deterioration of the competitive position of the cotton textile industry was caused not only by the reduction in the price of imported goods, but also by an increase in domestic costs of production. In December 1949 a regulation was enforced prohibiting imports of ginned or raw cotton and compelling the yarn manufacturers to purchase the domestic product at a controlled price, which was higher than that in the international market.

1/ In view of the fact that the production of cotton textiles and yarn was partly estimated on the basis of raw cotton and cotton yarn imports, and that a fraction of these imports was probably used to re-establish stocks, the increase of cotton textile production between 1945 and 1946 is possibly over-estimated.

2/ Foreign Commerce Weekly, March 20, 1950, page 36.

3/ Based on a decree empowering the Chief Executive to apply discriminatory tariffs against goods made in countries with a surplus in their balance of trade with Guatemala.

The productive capacity of the textile and clothing industries in Guatemala did not increase greatly after 1946. With the exception of a coffee bag factory producing 1,500 bags every 8 hours, which was established in 1950 with the financial assistance of the Instituto de Fomento de la Producción (Production Development Institute), of a shirt factory with a capital of 50,000 quetzales, and of a few small work-shops manufacturing native cloth for the export market, no new textile factories of any importance were established.

Availability of Raw Materials

All the important industries in Guatemala, with the exception of foodstuffs, chemical products and timber, depend largely on imported raw materials. According to 1946 census data, for the ten most important industrial groups, 41 per cent of the raw materials used were imported. The textile, clothing, beverages, building materials, printing and engraving, and the tobacco industries, used the highest proportion of imported raw material, according to this census.

The only change of any importance which occurred in the supply of raw materials was that of the textile industry. As a result of cotton development programmes, the Guatemalan textile industry has since 1949 been using increasing amounts of domestic raw materials. It is estimated that in a relatively short period the country will be able to supply all the cotton required by this industry. In 1946, 54 per cent of the country's raw material imports were made up of cotton.

Containers comprised 67 per cent of the total raw materials imported by the beverage manufacturers. During the war, a glass bottle factory was established in Guatemala but technical difficulties intervened and the plant never went into production, although the equipment is intact. It is quite likely that these technical difficulties may now be eliminated. Though raw materials for the manufacture of glass are found in Guatemala, their utilization in the manufacture of bottles would not be economic unless it were possible to make sales in foreign markets. However, the bottle-making industry might be based on broken glass, which exists in large quantities and which might also be imported.

Another of the leading raw materials imported by the beverage
/manufacturers is the

manufacturers is the malt required for the breweries. The country might perhaps produce barley for the brewing of beer, but for this purpose it would have to make use of land on which wheat is at present being grown, and the advantages of this substitution appears dubious.

The most important "raw materials" used in the clothing industry are wool and rayon cloth, in 1946, two-thirds of the value of which corresponded to imported cloth. Though its present volume of production might be considerably increased, Guatemala does not have the necessary conditions for the establishment of an important wool producing industry, even to meet its own consumption, and it is highly doubtful that the market justifies the establishment of spinning mills using imported wool. Therefore, the woollen textile industry will probably always depend on imported raw material. For the time being the situation with regard to the manufacture of rayon goods is the same. In this case the volume of imports is such that the market might be considered sufficiently large to justify the establishment of a rayon weaving industry.

It seems possible, on the other hand, that domestic raw material could eventually replace a large part of the imported material employed in the tobacco industry. Fifty-nine per cent of the raw materials imported by this industry is made up of tobacco leaf. (Of the total tobacco used by the industry, only 42 per cent is imported tobacco leaf).

In 1946, the total value of raw materials used by industry equalled 44 per cent of the gross value of industrial production, imported raw materials representing 18 per cent. This percentage may at present be lower, and in the future, it is very possible that there will be a tendency for the proportion of imported raw materials to continue to decline due to greater domestic supply of existing industries and the relatively more rapid development of industries using domestic raw materials.

Table 17. Guatemala: Utilization of Imported Raw Materials in the Ten Leading Industrial Categories, 1946 a/

<u>Industrial Category</u>	<u>Value of the Raw Materials (Thousands of quetzales)</u>	<u>Percentage of Imported Raw Materials</u>
Foodstuffs	6,139.0	18
Beverages	2,618.4	55
Tobacco	1,289.5	48
Textiles	2,441.7	70
Clothing	2,619.4	55
Chemical products	1,082.2	32
Wood	827.7	7
Building materials	776.1	49
Electricity and water	149.9	57
Printing and engraving	338.8	50
Total	18,282.7	41

Source: Adapted from the 1946 Industrial Census.

a/ Excluding fuels.

Transport

As was pointed out in the report on Economic Development of Guatemala, the expansion of motorized transport began during the 'twenties, when railway development was slowing down. This trend has become sharper since 1945.

The increase of motorized transport is well illustrated by the fact that between 1945 and 1949, imports of lorries and buses averaged 2,327 tons annually, whereas before the war (1937-39) they averaged only 606 tons. Petrol imports increased 162 per cent between 1945 and 1949, whereas between 1937 and 1944 there was an increase of only 58 per cent.

The increased availabilities of motorized transport equipment and the improvement of the roads, which enabled the establishment of new inter-urban networks, has led to a considerable increase in the number of passengers carried, and probably also in the volume of cargo. In 1949, the number of passengers carried by inter-urban buses was nearly five times higher than the number in 1945. Should this rate of expansion
/increase, the number

increase, the number of passengers carried by motorized transport in 1950 would be higher than those travelling on the railways, (approximately 4 million passengers per annum).

No data are available for the increase of the cargo carried by motor vehicles, but during the past few years several large new transport companies have been set up. Nearly all the large communities are connected by regular bus lines and the competition for trade has lowered the tariffs beyond the controlled rates set by the Government.

Air transport has followed the pattern set by motorized land transport. Between 1945 and 1949, the number of passengers increased from 16,000 to 74,000, and the volume of cargo increased from 3,500 to 4,100, while 6,000 tons were carried in 1948.^{1/} At present nearly all the important towns of Guatemala are connected by a regular air service, run by a State - owned company, with an autonomous administrative board.

The railways, on the other hand, show no such trend of expansion. The maximum cargo was carried in 1947, due principally to the increase of banana exports. This volume began to fall soon after and remained at a level 2.4 per cent below that of 1945. However, in no previous period of railway history in Guatemala was the volume of cargo carried so high. The same applies to the number of passengers carried by the railways, which had reached a maximum in 1947, but then began to decrease. This trend may be partly due to the competition of motor transport. Whereas the number of passengers carried by the railroads decreased 8 per cent between 1947 and 1949, the number carried by motorized means increased 42 per cent.

Comparing the relative increase of cargoes and passengers carried with the income derived by the railways from the transport of cargo and passengers, it would appear that railway rates have increased significantly. In certain sectors of the network, such as, for instance, from Guatemala to Puerto San José, which are also linked by a paved highway, the railway rates have lowered as a result of the competition of motorized transport.

^{1/} The reduction in the amount of cargo carried in 1949 is probably due to the contraction of chicle exports, which are carried by plane from the forest to the ports of embarkation.

Table 18. Guatemala: Cargo and Passengers Carried by the Railways and Income from the Transport of Cargo and Passengers 1945-1949.

Years	Cargo		Passengers		Income	
	Thousands of tons	Indices	Thousands	Indices	Thousands of quetzales	Indices
1945	935.0	100.0	3,855.2	100.0	6,412.5	100.0
1946	1,044.6	111.7	4,152.2	107.7	7,645.8	119.2
1947	1,141.1	122.0	4,122.7	106.9	9,583.2	149.4
1948	1,090.2	116.5	3,929.2	101.9	9,996.7	155.9
1949	912.4	97.6	3,790.8	98.3	9,016.6	140.6

Source: Boletín, Dirección General de Estadística (Bulletin of the General Statistical Department), Nos. 24 and 25, April-June 1950.

The railway is the only means of contact with the Atlantic seaboard in Guatemala. The Government has shown great interest during the past few years in stimulating competition in this sector, and with this object in view, it is planning to build a road which will open this sector to motorized transport.

There is another closely related problem which is a source of constant concern to the Government, namely, an available port on the Atlantic seaboard and the building of a merchant fleet. There is only one port at the present time - Puerto Barrios - where all the installations are the property of the same private company that owns the ships and the railways serving the port. This situation is a constant source of friction between the Government and the company. The company's system of transport must operate in such a way as to ensure the continuity of transport for the banana crops. All other considerations are secondary to this objective, since the success of the banana plantations depends largely on this factor. On the other hand, the absolute control of the transport system by a private company must necessarily be unsatisfactory to the Government. In a message to Congress, the Minister of Economy declared that "any form of shackling in matters of maritime transport involves the subjection of our basic economic occupations to foreign private interests, and the consequent insecurity of our system of production and of the Public Treasury."^{1/}

^{1/} Report of the Minister of Economy and Labour, Licenciado Alfonso Bauer Paiz, to the Congress of the Republic of Guatemala, Revista de Economía Nos. 2 and 3, 1949, pages 97 and 98.

It was proposed to solve this difficulty by the building of a railroad from the city of Guatemala to Puerto de El Estor, on the north coast of Lake Izabal, which is connected to the sea by a navigable river, to carry out the necessary port installations at El Estor and purchase small-tonnage shipping. These solutions were contained in a bill presented to Congress in 1949, together with other measures for providing the funds with which to develop the northeastern part of Guatemala. None of these bills have yet been carried into effect.

Production and Consumption of Energy

The consumption of energy in the country is expanding rapidly and has been stimulated by the development of motorized transport, by the extension of the electric light services to the great mass of the population who have thus far been deprived of it, and by the impetus of industrial development. The most important inanimate sources of energy in Guatemala have so far been the forests, together with domestically produced electric power and imported petroleum.

The importance of wood as a source of energy seems to have been decreasing for some time, partly because the nearby forest reserves have been exhausted and partly because of the raising of the wage level.

The consumption and production of electric power has increased remarkably. Excluding a number of small plants, for which no data exists, production increased 43 per cent between 1945 and 1949, that is to say, an annual average increase of 8 per cent. According to the information available, the increase in 1950 will most likely be more than 8 per cent.

As was said in the report on the Economic Development of Guatemala, the minimum reserves of hydro-electric power in the country amount to some 12,560 million kilowatt-hours per annum. The present consumption of inanimate energy, excluding coal and wood, is about 680 million kilowatt-hours. Petroleum and its by-products provide about 88 per cent of this total, the greater part of which is consumed by the railways and motorized transport. The replacement of a large proportion of petroleum consumption by electric power seems unlikely unless the railways are electrified. Moreover, the industries which could be developed in

/Guatemala are not

Guatemala are not large consumers of electric power, with the possible exception of the manufacture of electrolytic zinc. According to a report drawn up in 1945, the San Miguel Acatán region of the department of Huchuetenango is "a potential source of lead and zinc which may become very valuable in the future"^{1/}, and in the Cobán region of the Alta Vera Paz Department, lead and zinc are already being mined on a commercial basis.

The consumption of petroleum and its by-products doubled between 1945 and 1949, and since the war has accounted for 10 per cent of Guatemala's total imports. It is believed that there are extensive petroleum deposits in the northeastern sector of Guatemala. Until about the middle of 1949 this area was being drilled by three foreign companies, who withdrew because they were unable to reach an agreement with the Government as regards contracts and concessions.

Table 19. Guatemala: Consumption of Inanimate Energy - Excluding Charcoal and Wood.

Years	Electric power		Petroleum by-products		Total consumption		Per capita consumption	
	1,000 KWH	% of total	1,000 KWH	% of total	1,000 KWH	Indices	KWH	Indices
1945	55,252	19.1	288,883	80.9	344,135	100.0	131.9	100.0
1946	59,992	14.4	356,652	85.6	416,644	121.1	157.3	119.3
1947	65,507	12.2	470,028	87.8	535,535	155.6	198.4	150.4
1948	70,181	11.2	609,171	88.8	679,282	197.4	249.0	188.8
1949	78,848	..	..	..	..	..	..	..

Source: Data supplied by the General Statistical Department. Petroleum was converted into its KWH equivalent, the calculation being based on 2,470 KWH per metric ton of petroleum.

In 1949, Guatemala's petroleum legislation was modified. The outstanding features of the new Petroleum Law are as follows: a) experimental drilling concessions shall not be granted for areas of more than 200,000 hectares; b) experimental drilling concessions shall only entitle the holder to

^{1/} Blandford C. Burgers: Report on the Utilization of the Mineral Resources of the Republic of Guatemala. (Inter-American Development Commission, Washington, D.C. March 1946, page 41.)

working rights when the concession is held by the State, a citizen of Guatemala or a Guatemalan company, the capital of which must be predominantly domestic (65 per cent of the capital must be subscribed by Guatemalan nationals); c) the working concessions shall be of an area not greater than 100,000 hectares, and shall only be granted to the State, to Guatemalan nationals and to Guatemalan companies, the capital of which must be predominantly national; d) the State may, however, grant experimental drilling and working contracts to both national and foreign undertakings; e) in this case, the State reserves for itself 12.5 per cent of the gross petroleum production, the rest being used to amortize the capital invested by the contractors: moreover, the State is entitled to 15 per cent of the net value of production. The machinery and equipment for working the wells shall become the property of the State from the moment they are acquired by the contractor and their value is paid in petroleum. The contractor must undertake to build refineries. The Petroleum Law also established the Instituto Nacional de Petróleo (National Petroleum Institute) the object of which is to "formulate domestic petroleum policy and carry out the legal provisos which must be observed by the private companies in the course of their transactions^{1/}" Since its establishment, the National Petroleum Institute has carried out various experimental drillings, the results of which are unknown. It has also opened a school for petroleum technicians.^{2/}

Government Policy

The change of Government policy in relation to various branches of economic activity has, in fact, been more far-reaching than the events which mark the course of development in transport and energy, the creation of new industries, with their attendant difficulties, and even foreign competition itself.

1/ Statement of the Ministry of Economy and Labour on the new project of the Petroleum Law, published in the Revista de Economía, Nos.2 and 3, 1949, page 36.

2/ Data supplied by the Ministry of Economy and Labour in 1949. El mes económico y financiero, February 1950, page 20.

/Until 1945 the

Until 1945 the Government was largely indifferent to industry. Even when it granted protection to various sectors of manufacturing, it was not believed that conditions existing in Guatemala were favourable to industrial development. In the report prepared by the Government representatives for the Inter-American Commission of Economic Development, the Government's attitude in this respect was clearly expressed. The prevailing opinion since 1945 seems to be that within acknowledged limitations, industries may acquire far greater relative importance within the orbit of domestic economic activity as a whole.

In accordance with this new trend, the "Ley de Fomento Industrial" (Industrial Development Legislation) and the Instituto de Fomento de la Producción (Production Development Institute) were created as a stimulus to industry. The Industrial Development Law empowers the Executive to grant Customs exemptions for machinery and equipment, raw materials and building materials, and to reduce taxation on excess profits and on property.

The law classified industries under various groups according to two criteria: 1) whether the raw material used is of domestic or foreign origin, and 2) whether it is a new product or not.

The industries which work exclusively with domestic raw materials, whether previously established in the country or not, are entitled to Customs tariff exemptions on building materials, machinery and equipment for a period of ten years. The industries working with both imported and domestic raw materials are entitled to similar tax exemptions but must pay tax on raw material imports and are not granted tax reduction facilities for excess profits and property. The period for which these privileges are granted and the amount of tax reductions increase in relation to the proportion of domestic raw material used, and according to whether the companies have been recently established or are of long standing.

In order to enjoy these privileges, the law establishes that 100 per cent of the capital be of domestic origin if the whole of production is placed on the domestic market and if productive technique is fairly simple. The capital may be either national or foreign when the industries produce goods for the export market.

/In spite of the

In spite of the fact that since the law was passed at the end of 1949, 41 companies have already taken advantage of its facilities,^{1/} it is doubtful whether it offers sufficient inducement to industrial development.

The Guatemalan tax rates are not actually heavy and therefore reduction of taxes on excess profits can hardly be considered as an effective incentive. The ad valorem import duties on machinery varied from 10 per cent to 15 per cent in 1948. A reduction of 10 per cent to 15 per cent in the c.i.f. value of machinery would only affect the cost of production slightly, especially in view of the long period of depreciation.

The fact that no facilities are granted on imports of raw materials can perhaps be justified as a means of checking the development of occupations which depend largely on foreign supplies, but the law seems in any case too strict. There are certain activities which might develop economically, (such as the pharmaceutical industry, for instance) but which are unable to do so, partly because the duties on the raw material are higher than those on the corresponding finished product. In the case of rayon weaving, for example, a preferential treatment for the raw material would probably be justified.

The good or bad points in the industrial development legislation must be considered in terms of what are thought to be the greatest obstacles to manufacturing development in Guatemala.

Apart from the general limitations of natural raw materials and the small size of the market, perhaps one of the greatest barriers to such development is the lack of knowledge regarding the opportunities for investment. The largest fortunes in Guatemala are invested in trade and agriculture, but have rarely been applied to industry. This is probably due to sociological as well as economic reasons such as the consideration of the risks involved. However, the lack of knowledge concerning the opportunities for investment, and the fact that such knowledge might be acquired at the expense of a number of unproductive investments is undoubtedly a fundamental factor.

^{1/} Report of the Ministry of Economy and Labour in 1949, published in El mes económico y financiero, February 1950, page 18.

/Another considerable

Another considerable obstacle to the development of investment which has been widely discussed, is the lack of an organisation which could accumulate and channel individual savings and which would act as an underwriter for new stock. Finally, there is the consideration of the already mentioned risks involved. Evidently, the element of chance is much greater in industry than in agriculture or in business, so that the profits of industry must be much higher in order to compensate the difference and stimulate the displacement of investments from one sector to the other. Given the high profits of trade and agriculture, it is hardly likely that entrepreneurs in these sectors should seek investments in other fields.

According to these criteria, industrial legislation can hardly be expected to have a great effect in encouraging investments in industry, since it does not eliminate any of the principal obstacles to the more rapid expansion of industrialisation. On the other hand, the establishment of the Production Development Institute, which began operating in December 1948, was a great step towards the solution of these basic problems. Its Development Department is authorised "to establish industrial undertakings on its own account and to purchase shares, bonds and debentures issued by companies which are beginning operations or extending branches of production or services which offer sound development possibilities", and "to guarantee the whole or part of the amortization, interests and dividends of bonds and shares issued and loans contracted by the aforesaid companies, provided they are subject to the financial control of the Development Department". Moreover, it is authorised to "issue, float, buy, sell or receive and deposit any shares, bonds or other quoted stock", and "to grant loans thereon and act as a fiduciary". In this way the Development Department can act as an underwriter

In Clause (a) of Article 10, the Development Department is authorised on its own account, or in co-operation with other organisations, to undertake research relating to the basic resources of the country for the purpose of determining the possibilities of establishing new industries or other productive occupations. This authorisation enables the department to become an active promoter of development.

As regards the reduction of risks in industrial ventures, the only

/means which the

means which the law offers the Development Institute for this purpose is the establishing of its own companies and the right to transfer them to private enterprise, once their success is ensured. This process requires more capital than the Institute possesses.

The tasks of the Development Institute, according to the Work Plan for 1949, are principally directed to achieving the following: a) the introduction of modern technique in existing industries with a view to lowering the cost of production; b) the expansion of industries and the establishing of new ones; c) the reduction of certain sectors of imports which could be economically replaced by domestic production.^{1/}

In the field of manufacturing, the Institute, in 1949, proposed to "study and develop the following industries: cement, glass, sacks, leather, fertilisers, vegetable oils, meat and dairy products, with a view to rationalising and expanding their production."^{2/}

By the end of 1950 the Ministry of Economy had presented a bill to Congress proposing the establishment of a system of State Development Banks which would also include a Workers' Bank (Banco de Trabajo), an Agricultural Bank and a Mining Bank.

The proposed Industrial Bank was intended to facilitate the granting of medium and long-term loans to private industry, to the State and to Municipal authorities for their industrial ventures. The authorised capital amounted to 50 million quetzales and would be financed by an ad valorem tax of 2 per cent on all imports and exports, with the exception of those exempted by the State. (It is estimated that this tax would bring in a revenue of 3 million quetzales per annum.) It should be mentioned that the Development Department of the Institute is authorised to carry out the same functions as are assigned to the Industrial Bank.

^{1/} The Production of Development Institute Working Plan for 1949, Revista de Economía, Nos. 2 and 3, 1949, page 199. The term "industry" does not apply only to manufacturing, but also includes agriculture.

^{2/} Production of Development Institute, op. cit. Page 204.

CHAPTER IV THE PROCESS OF EXPANSION AND ITS EFFECTS ON THE MONETARY SITUATION, ON PRICES AND ON THE BALANCE OF PAYMENTS

The Monetary Situation

Monetary circulation in Guatemala increased at an annual rate of 32 per cent between 1938 and 1945. From the end of 1944 till the end of 1949, the average rate of increase was 10 per cent, though since 1946 it has only increased 4.3 per cent per year.

The most important cause of monetary expansion since 1944 was the increase of foreign exchange reserves which, since 1938, amounted to 34.5 million quetzales, as compared with an increase of 24 million in currency circulation. As can be seen in Table 20, this factor continued to have considerable influence until 1946, after which its pressure was weakened and, since 1948, the loss of foreign exchange reserves has served to moderate the monetary expansion arising from bank loans and the Government's financial operations.

The loans and banking investments amounted to 17.5 million quetzales in 1945 and totalled 35.8 million in 1949, an increase of 105 per cent as compared with a rise of about 36 per cent in the level of wholesale prices.

The large proportion of the increase in commercial bank loans was derived from the State Bank. Since July of 1946, when the Bank of Guatemala was founded, until the end of December 1948, the Banco de Crédito Hipotecario (Mortgage Loan Bank) increased its loans by 7 million quetzales, whereas the total of loans granted by all the other commercial banks only increased by 3 million. In 1949, the loan policy of the Banco Hipotecario became stricter; loans for buildings, the purchasing of land and financing of hire-purchase sales were refused. A large share of the increase in loans granted by the Bank during 1949 was used in financing State farms which were organised as an autonomous undertaking in that year.^{1/}

^{1/} Formerly these farms were financed by State funds.

Table 20. Guatemala: Gross Factors of Monetary Expansion, 1945-1949
(annual changes in thousands of quetzales)

	1945	1946	1947	1948	1949
<u>Bank of Guatemala</u>	6,600	11,000	4,400	- 1,300	- 500
Foreign exchange transactions <u>a/</u>	7,000	5,700	2,400	- 3,700	-9,400
Discounts and re-discounts	- 400	2,700	1,000	1,900	2,200
Transactions with the Government	-	2,600	1,000	500	6,700
<u>Commercial Banks</u>	2,300	2,000	1,000	4,800	4,200
Foreign exchange operations	- 600	1,500	- 500	- 300	900
Loans and investments <u>b/</u>	2,900	500	1,500	5,100	3,300
<u>The Total Banking System</u>	8,900	13,000	5,400	3,500	-3,700
Foreign exchange operations	6,400	7,200	1,900	-4,000	-8,500
Loans and discounts	2,500	3,200	2,500	7,000	5,500
Transactions with the Government <u>c/</u>	-	2,600	1,000	500	6,700
<u>Increase of currency</u>	7,600	5,000	600	3,400	2,600
Government deposits	- 800	4,400	4,700	-2,200	-1,400
Savings deposits	100	400	800	- 900	400

Source: Adapted from International Financial Statistics, Nov. 1950, page 44.

a/ Does not include the foreign exchange reserves of the Government.

b/ Discounts and re-discounts in the Bank of Guatemala have been subtracted from loans and investments in the banks.

c/ Loans and investments of the banks also include loans made to the Government since 1948.

/On the other hand

On the other hand, while the Banco Hipotecario altered its policy, the other State bank, namely, the Production Development Institute which had begun to operate in 1949, granted 4.7 million quetzales in loans during the course of that year. Thus its share in the increase of loans, discounts and investments was 73 per cent of the total granted by commercial banks.^{1/}

In September 1949, 27.5 per cent of the loans granted by the banking system were for purposes of assisting agricultural and cattle breeding activities, 9.8 per cent for industry, mining and transport, 15.6 for trade, 2.2 per cent for the State and the remaining 4.9 per cent for ordinary expenditure and the payment of transfers such as the purchase of properties, debt redemptions, etc.

It is possible that agriculture and cattle breeding derived the greatest comparative benefit from the increase of loan facilities, especially since the Development Institute began operations. In fact, 60 per cent of the loans granted by the Institute during 1949 were directed toward these occupations, a further 34 per cent being granted for industry and 6 per cent for other purposes.

By the end of 1950 the distribution of the bank loans granted had been changed. There was a contraction in the amounts diverted to agriculture, consumption and transfer payments, but commercial loans increased to 16.8 per cent of the total while those to the Government increased to 12.1 per cent.

Few deposits were made in State banks. By the end of 1950, whereas portfolio loans and investments accounted for 59 per cent of the total operations of commercial banks in this sector, cash deposits and savings amounted to only 25 per cent of total deposits.

The limitations of resources of the Banco de Crédito Hipotecario compelled this bank to turn to the Bank of Guatemala for assistance in financing its own expansion. Out of a total of 1.9 million quetzales to increase advances and re-discounts of the Bank of Guatemala in 1949, 84 per cent were granted to the Crédito Hipotecario and 10.5 per cent

^{1/} Report of the Bank of Guatemala for 1949. Diario de Guatemala, May 31, 1950.

to the Production Development Institute.

The greater part of the loans and investments expansion of the Bank of Guatemala was for the purpose of financing Government transactions.

The bonds issued by the Government and actually in circulation, increased by 7.7 million quetzales from 1948 to 1949, and used for the building of the National Stadium and other contractual obligations connected with the Caribbean Olympic Games, and also for financing emergency expenditure for storm damage, the initial transactions of the Production Development Institute, and the first expenses stages of the Hospital Building Programme undertaken by the Social Security Institute.

The Bank of Guatemala accounted for 7 million quetzales of the total of the consolidated public debt, which meant a net increase of 6.7 million in Government bonds held by the Bank. During 1950 up to September, these holdings had increased by only 451,00 quetzales.

Monetary and Banking Reforms

At the end of 1945, Guatemala undertook a thorough reform of its monetary and banking systems, which was implemented by the passing of the "Ley Monetaria" (Monetary Law), the "Ley Orgánico del Banco de Guatemala" (Organic Legislation of the Bank of Guatemala) and the "Ley General de Bancos" (General Banking Law).

In stating the reasons for reform,^{1/} it was pointed out that the changes were based on the experience gained during the past 15 years in Guatemala, which included: a) a vast reduction of credit facilities, owing to the consecutive liquidation of various banking establishments (after the reform only one branch of a foreign banking establishment remained in operation); the progressive reduction of bank loans to half their level obtaining between 1929 and 1931, and the growing monopoly of a single establishment, of a semi-official nature, extending bank loans, and b) the violent fluctuations in the volume of the money in

1/ Roberto Triffin: Plan de Reforma Monetaria y Bancaria para la República de Guatemala, Informe Preliminar (Guatemalan Monetary Banking Reform - Preliminary Report) - Revista de Economía, Año I, No. 2, Guatemala, 1946. Pages 12-13.

circulation, (there had been a reduction of more than 40 per cent in three years (1930-32) and an increase of more than 40 per cent from 1939-45); these variations were aggravated by the passive attitude or impotence of the monetary authorities and by their exclusive preoccupation with exchange stability.

The reform was therefore intended to establish a sounder credit basis and the means with which to carry out a policy of greater monetary stability in the widest sense.

The original project of reform consisted of: a) the founding of a simple Central Bank governed by a monetary board made up of Government representatives and private persons; b) an agricultural and industrial bank, for the purpose of extending productive loans for long or medium periods, which would enable the Central Bank to operate in the credit market; c) an insurance and capitalisation fund which would issue insurance and capitalisation policies and administer the funds obtained from social security sources; d) an institute of agricultural development which would grant rehabilitation loans, offer technical assistance to farmers and organise a programme of stabilisation of agricultural prices; e) an industrial development institute which would share in new agricultural and industrial undertakings, subscribing up to one third of the capital required, and f) a fund for the control of the stock market, in order to provide a constant market for official and semi-official bonds.

Only two of the organisations proposed in the original bill remain: the Bank of Guatemala, which has been granted a fund for the regulation of the bond market, and the Production Development Institute. The latter is a mixed institution, acting both as a commercial bank and assisting agricultural and industrial development.

Economic Expansion and Prices

There are no general wholesale price indices in Guatemala for the period preceding 1946, and the only available cost of living indices date from February 1946. A wholesale price index based on the unit prices of imported foodstuffs, textiles and clothing, shows an increase of 13.6 per cent between 1938 and 1945. Foodstuffs alone show an

/increase of 13 per cent

increase of 13 per cent, clothing 14 per cent and textiles 20 per cent. It would appear that during this period the prices of imported and domestic goods rose more or less uniformly. This may be seen in the price of foodstuffs, since indices exist for retail prices of foodstuffs in Guatemala City, showing an average annual increment of 10 per cent. The similarity in the rise of textile prices cannot be proved by statistics, but the rise in the price of imported products must have been greater because their influence is felt both on the sales price fixed by competition, and on costs which are influenced by the price of cotton, - the important raw material in Guatemala's textile industry and which was almost entirely imported during the whole of this period.

The rate of increase of domestic prices began to fall in 1947 and this also occurred in relation to imported products. However, in 1949, whereas the price of imported products was reduced, the price level of domestic production continued to rise.

Table 21. Guatemala: Changes in Wholesale Prices of Domestic Production by Categories.

January 1946 = 100

Years	Total	Foodstuffs and beverages	Textiles	Building Materials	Fuel	Miscellaneous
1946	115.6	118.2	117.4	107.9	114.4	108.1
1947	124.9	123.9	134.2	116.2	128.5	138.3
1948	131.8	135.1	131.7	117.8	130.4	137.7
1949	136.0	145.8	124.4	118.6	135.3	106.6
1950 ^{a/}	143.5	156.1	119.5	122.7	141.5	113.2

Source: Bulletin of the Bank of Guatemala, September 1950, page 36.

a/ Preliminary estimate.

The rising price level in Guatemala during the period under observation may largely be ascribed to the increases of prices on the world market, which can hardly be offset by measures taken locally. In fact, during the 5-year period, the stabilisation of the general price level made it necessary to reduce prices of domestic products to such an extent that they would compensate for the rise in the price of imported /goods. However

goods. However, this policy would have involved so sharp a monetary contraction that it is doubtful whether the results would compensate its cost.

The raising of the general price level was followed by changes in the relative prices of various products or groups of products. Up to 1947, the sharpest rise shown was in the price of textiles. Since that year, however, prices of foodstuffs increased to an even greater extent, this applying both to imported foodstuffs and to those of domestic origin.

Prices of domestic textiles followed the price trend on the world market, but, whereas in 1949 prices of domestic foodstuffs continued to rise, those of imported foodstuffs tended to drop. The fact that the rise in foodstuffs was relatively greater, can principally be ascribed to the inelasticity of supply which, as will be shown below, hardly increased during the war.

In some cases, the inelasticity of foodstuff supplies has been increased not only by technical factors, but also by adverse climatic conditions (for instance, in 1949), and also by reason of the rising price level itself. As the prices of maize and beans have risen more rapidly than prices of other consumer goods, thus increasing the real income of the small producers, it is possible that producers may have reserved a greater proportion of the harvest for their own consumption.

Table 22. Guatemala: Changes in the Wholesale Price Level for Selected Agricultural Products

1946 = 100

Years	Maize	Beans	Rice	Potatoes	Brown Sugar	Wheat	Coffee
1945	97.4	106.2	92.0	51.3	74.9	81.0	80.9
1946	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1947	95.6	66.1	83.6	81.5	79.8	112.0	121.7
1948	136.7	122.0	103.5	99.0	60.0	138.8	121.0
1949	168.7	168.0	111.4	86.4	70.0	142.9	138.9

Source: Based on quotations published in the bulletins of the Statistical Department for the City of Guatemala.

On the whole, the increase in the price level during the post-war period has been much greater than the expansion of the money supply. Apart from changes of prices on the world market and adverse climatic /conditions, factors

conditions, factors which may have brought about this rise, there are also other possible causes for this upward movement.

In the first place there seems to have been a change in the public preference for holding liquid assets; the increase in the rate of circulation of deposits which has occurred since 1947

In the second place, the expanded activity of the State probably led to a re-distribution of income which favoured the poorer sectors of the population, whose propensity to consume foodstuffs is greater than that of the average for the country as a whole.

There was also a change in the structure of production, resulting in services increasing to a greater extent than manufacturing production, and manufacturing production more than agriculture, so that this alone would have affected relative prices independently of monetary causes.

Finally, the wage policy affected the price level of domestic goods. Since the beginning of the new political regime in 1945, the Government has attempted to raise the wage level and the increases made were substantial. This policy has reinforced the effects of the re-distribution of income which government expenditure have brought about and raised the cost of production, lowering the margin of profits for all these products in which it was not possible to transfer the increase to the consumers.

Price and Wage Policy

Guatemala has since 1945 adopted a price policy which, in part, was intended to stabilise the consumer price level and in part to stimulate the increase of money wages.

The effort to stabilise consumer prices by direct intervention dates from before 1945, when this task was entrusted to an organisation known as 'Sección de Coordinación Económica y Financiera' (Economic and Financial Coordination Section). In 1945, a law known as "Emergencia Económica" (Economic Emergency Legislation) was passed, granting the Executive Body of the Government wide price control powers.

The most important means of control adopted have been: a) the establishing of ceiling prices or maximum profit margins; b) the control of distribution, and c) the importing of certain products by the State,

/in order to

in order to use them as stabilisation stocks.

The control of distribution was suspended recently and, at present, the price control is only applied to certain imported articles, such as iron for construction, certain types of foodstuffs, pharmaceutical goods and some durable consumer goods.

Rents are likewise subject to control, and the prices of meat, milk, salt, sugar and its bi-products, and cacao beans.^{1/}

An attempt has also been made to stabilize the price of maize and beans though this has met with little success. It is interesting to note that the raising of the price level of maize in relation to other products implies an improvement of the terms of trade for the low income agricultural classes, who produce the bulk of this crop, and a deterioration of these terms for the urban minorities and for the coffee growers, who are compelled to pay a part of their labourers wages in maize.^{2/} The rapid rise of maize prices could weaken the relation of coffee prices to maize to such an extent that it might endanger the competitive position of Guatemalan coffee on the world market. From 1946 to 1949 the relation between coffee and maize prices changed unfavourably for coffee from 100 to 82.3, but in 1950 the position improved. An exaggerated rise in the price of maize would incline the population to remain in the over-populated western area.

In order to raise the wage level, recourse was had to measures such as the establishment of a minimum wage and social security contributions, together with the organisation of labour syndicates.

No general minimum wage level was established until the end of 1949, since it was necessary to await completion of the preparatory work involved in its calculation; though as early as 1943, minimum wages were

^{1/} Since the end of 1950, in view of international events, more attention is being given to the control of prices and to rationing.

^{2/} Until 1949, this also involved a fiscal problem, due to the fact that the State was an important coffee grower and therefore the raising of the price of maize was reflected in its expenditure.

/being set in

being set in certain industries. On the other hand, a law was passed in 1947, compelling employers to pay an extra full day's wages weekly to employees who normally worked a six-day week. A social security programme was introduced, a quarter of the cost of which was paid by the labourer, another quarter by the State and half by the employer. By the end of 1950, social security facilities had been extended to 170 thousand labourers.

Based on the Labour Code, introduced in May of 1947, the syndicates have worked actively and so have brought about significant increases in the wage levels in certain industrial and agricultural sectors. The syndicates have not, however, developed to the same extent in the rural areas as in the towns, though by 1948, 74 syndicates were established in addition to the 43 which already existed. In February of 1949, the "Federación Regional Central de Trabajadores" (Central Regional Federation of Labour) was founded specifically for rural workers.

Unfortunately it is not possible to follow the course of the wage levels and rural income of the wage earners. In 1945, money wages paid on the cotton plantations fluctuated at about 20 centavos (of a quetzal) per day. In 1949, they had been increased to 40 centavos, that is, an increase of 100 per cent. In 1945, wages in kind amounted to little less than half of money wages. Thus, in accordance with the raising of the price level of consumer goods, the rural rate of wages in the coffee industry should have shown an improvement during the last five years.^{1/}

Workers on the banana plantations and in manufacturing industries probably received greater increases than the workers on coffee plantations. On the other hand it is evident that employees and especially civil servants, have sustained severe losses.

The foregoing indicates that the efforts to stabilise prices by means of specific controls or by means of monetary measures, have failed because, as in the case of Guatemala, the upward tendency springs from prices on the world market, and from the re-distribution of income, as well as the changes in the structure of production. If it were possible

^{1/} This statement may not apply to female and child labour.

/to increase the

to increase the production of certain basic foodstuffs more rapidly than that of services, it is possible that prices would not have increased so greatly. The effects of these distortions on the structure of production cannot be eliminated by dealing with the liquidity of the system alone.

The Factors of Expansion, Imports and the Balance of Payments

From 1945 to 1948, Guatemalan imports increased rapidly. The increment during this period amounted to 193 per cent. In subsequent years, however, though the quantum of imports expanded slowly, the value remained stable.

The average quantum of annual imports during the post-war period was 52 per cent higher than the annual average for the period 1925-29 and approximately equal to that for the period 1937-39.

As was to be expected, after a period of considerable shortage of capital goods, imports of this type increased rapidly during the post-war period. While the total value of imports doubled, that of capital goods increased by about 300 per cent.

Table 23. Guatemala: Imports and the Capacity to Import, 1945-1949

Years	Current value of imports	Capacity to import	Utilization of the capacity to import			Availabilities for other uses
			(In millions of quetzals)			
			Total and raw materials	Consumer goods	Capital goods	
1945	23.3	37.6	23.3	17.8	5.5	14.3
1946	36.2	47.3	33.3	26.1	7.2	14.0
1947	57.3	53.7	43.4	32.6	10.8	10.3
1948	68.4	48.5	47.5	35.1	12.4	1.0
1949	68.0	44.7	49.6	37.1	12.5	- 4.9

Source: Statistics prepared with data obtained from bulletins of the Statistical Department and the Bank of Guatemala.

Within the sectors of consumer goods and raw materials, the most important groups, at constant prices, are: textiles (22.9 per cent), chemical products (20.4 per cent), foodstuffs, beverages and tobacco (14.4 per cent) and fuels (14.3 per cent). These four groups comprised 72 per cent of the quantum of imports during the period 1945-49. The

/volume of imports

volume of imports in these four groups increased 88 per cent between 1945 and 1949, whereas the total increase in this category was 108 per cent.

An increase of this magnitude in the volume of imports of consumer goods and raw materials - which are less affected by accumulated demand than are durable goods - cannot be explained solely in terms of an increase of real income. Of the four principal groups cited, fuels and lubricants increased as a result of the expansion of motorized transport. This development may perhaps be accounted for both by a process of substitution and by the increase of real income in the country. The increase in imports in the textiles group was first influenced by the need to replace stocks and later by price reductions on the world market, leading to a displacement of domestic demand toward the imported product. Lastly, imports of foodstuffs are largely determined by the deficiency of domestic supplies, arising from adverse climatic conditions and partly by a price increase similar to that occurring in the field of textiles, which was especially marked in the case of lard and vegetable oils. The government, in an endeavour to avoid local price increases, granted certain tariff concessions, which contributed towards the substitution of domestic by imported products.

Chemical goods showed the smallest increase in the volume of imports which consisted largely of products used to combat diseases on the banana plantations; these were not much affected by the increase in the national income.

Imports of other groups of secondary importance increased more rapidly than the category as a whole. Among the most outstanding increases is that registered in the group of durable consumer goods, perhaps due to the very low level used as a basis for comparison. In relation to the post-war level (1937-39), the average volume for the period 1945-49 was 98 per cent higher, but here again, as in the case of capital goods, accumulated demand had a considerable influence.

If it were possible to reduce each of the numerous factors affecting the total volume of imports and their current value to a single quantitative expression which could be applied to capital goods, consumer goods and raw

Table 24. Guatemala: Changes in the Composition of Consumer Goods and Raw Materials - 1945-1949

(1945 = 100)

	% of the total	1946	1947	1948	1949
Foodstuffs, beverages and tobacco:					
Value	14.4	126.6	202.1	249.3	284.6
Volume		105.1	147.2	155.6	209.1
Textiles and manufacturing:					
Value	22.9	154.6	241.6	231.3	216.2
Volume		138.1	187.3	168.8	191.5
Chemical Products and similar:					
Value	20.4	142.0	151.1	206.7	190.8
Volume		132.7	117.1	139.4	120.9
Fuel and lubricants:					
Value	14.3	125.6	236.4	414.4	337.4
Volume		151.2	201.9	261.3	255.5
Durable consumer goods:					
Value	3.8	713.0	2226.4	2794.3	2958.5
Volume		600.0	1494.6	2339.8	1673.1
Other consumer goods and raw materials:					
Value	24.2	189.4	256.1	289.3	273.6
Volume		193.0	218.0	251.0	248.0
Total of the category:					
Value		155.3	236.0	277.1	265.7
Volume		146.3	182.9	197.2	208.3

Source: Statistics prepared with data obtained from bulletins of the Statistical Department and the Bank of Guatemala.

/materials, it might

materials alike, it might perhaps be concluded that the expansion of the domestic economy was not sufficiently great to cause the losses in foreign exchange that began to occur after 1948.

It should not be forgotten that the unit price of imports increased 40 per cent between 1945 and 1949.

At the end of 1947 the country had a large foreign exchange reserve and it was necessary to decide whether to maintain this reserve at a high level or to allow its decrease. The first alternative would have involved the restricting of private and public investments by means of credit and/or increased taxation, or alternatively restricting imports by any of the known practices. In effect, it was decided to allow these reserves to shrink by converting them into a greater availability of capital and consumer goods and leaving the market free so that the proportions of these types of goods could be determined by demand. It was thought that a distribution of these foreign exchange reserves biased in favour of capital goods would involve the introduction of many complicated controls.

Table 25. Guatemala: Changes in the Value at Constant Prices, of the Leading Foodstuffs,
 1945 = 100

	1946	1947	1948	1949
Bovine cattle on the hoof	201.3	278.2	234.6	148.7
Lard	95.3	50.0	46.2	489.6
Skimmed and powdered milk	171.7	296.0	449.1	684.9
Wheat flour	81.7	108.8	120.7	119.6
Malt and germinating cereals	138.0	197.0	168.0	118.0
Whisky	221.0	292.1	248.2	237.7
Tobacco leaf	149.3	134.6	235.8	202.4

Source: Statistics prepared with data obtained from bulletins of the Statistical Department and the Bank of Guatemala.

Other Changes in the Balance of Payments

Apart from the increases shown in the group for merchandise, other interesting changes have taken place in the structure of the Balance of Payments in the post-war period, namely, the expansion of income as a result of the tourist trend which enriched the country by 2 million quetzales /in 1949.

in 1949. This revenue, however, decreased considerably in 1950. Another interesting feature was the liquidation of the amortization and services payments on the Public Debt, which had been almost entirely amortized during the war and early post-war years. No great changes occurred in the relations between the net

on such capital. The country continues to show a deficit in these transactions.

Table 26. Guatemala:

(millions of quetzales)

Years	Balance on the	Balance on the	Deficit (-) or	Gold and foreign
		services	the current	exchange transfers
		account	account	
1946	19.6	- 11.1	8.5	7.2
1947	25.7	- 17.4	8.3	4.2
1948	10.3	- 13.0	- 2.7	- 5.9
1949	1.4	- 8.8	- 7.4	- 9.0

Source: For 1946: Balance of Payments Yearbook 1948, and Preliminary 1949, page 218, International Monetary Fund, Washington, D.C. 1950).
For the remaining years: see the Report of the Bank of Guatemala 1949.