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RECENT DEVELOPMENTS AND TRENDS IN THE MEXICAN ECONOMY

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DEMOGRAPHIC CHANGES AND THEIR EFFECTS ON DEVELOPMENT

Population growth in the decade 1940-1950

According to the preliminary results of the seventh General Census of Population, taken in June 1950, the population of Mexico had risen to 25.6 million, i.e. an increase of 30 per cent over 1940. The absolute increase of population is less important than the changes in occupational and geographical distribution which occurred during the period and which are an indication of the remarkable vitality of the Mexican economy in recent years. Although the changes in occupational distribution cannot be determined accurately on the basis of the data at present available the principal changes in spatial distribution can be established.

The geographical changes that have occurred accentuate the secular trend to the displacement of population towards Mexico City and the northern border. In the first half of the twentieth century this displacement has reached very considerable proportions which are indicative of the magnitude of the agricultural and industrial transformation of the Mexican economy which has already been achieved.

According to research carried out by the Commission the four principal areas of demographic pressure -- the central region (with the exception of the seven largest cities), the State of Oaxaca, the States of Yucatan and Campeche and the Southern territory of Lower California -- accounted for 61.0 per cent of the total population of Mexico in 1900 but had fallen to 45.4 per cent in 1950. In contrast, the three main areas of demographic attraction -- the northern border areas, the seven largest cities (including Mexico City) in Central Mexico and the Territory of Quintana Roo -- which accounted for only 17.0 per cent of the total population in 1900 had risen to 30.5 per cent in 1950. The absolute figures are equally significant; in a fifty-year period, while the four emigration areas increased from 8.3 to 11.6 million, the areas of demographic attraction rose from 2.3 to 7.8 million. During the same period the remainder of the country doubled its population, rising from 3.0 to 6.1 million, although the relative importance, 22.0 per cent in 1900 and 24.1 per cent in 1950, remained approximately the same.

This displacement reflects both absorption of the rural population by industry and services and a transfer within agriculture itself from regions where the traditional economy prevails towards the new irrigated areas, situated for the most part in the north of the country.

The changes in occupational distribution, which during the 50 year period were less spectacular than the geographical readjustment, have been greatly accelerated in the last 10 years. On the basis of the population growth of the three main urban centres and assuming that the non-agricultural population elsewhere in the country has increased at half this rate and that the proportion of employed to total population has not changed in the last 10 years, it can be estimated that the number of persons employed in agriculture is now only 55 to 60 per cent of the total population (65 per cent in 1940) and that the number of persons engaged in secondary and tertiary activities is already 40 to 45 per cent (35 per cent in 1940). In absolute terms this means that 4.2 to 4.5 million persons are now engaged in agriculture, as against 3.8 million in 1940, and that 3.1 to 3.4 million are engaged in other activities, in comparison with 2.4 million ten years ago.

Migration abroad in the period 1947-1950

In addition to the process of internal redistribution, the emigration of workers from Mexico to the United States has continued. This phenomenon is due to the same causes as the internal readjustment; this is borne out by the fact that the majority of the emigrants, seasonal and permanent, come from the centre, which was described in the previous section as the main emigration area.

The movement of workers to the United States averaged more than 100,000 persons annually in 1944 and 1945 as a result of the shortage of labour in the United States during the war. From 1947 to 1949 the number of workers reached a peak of only 72,800 in 1947 and rapidly fell to 24,300 in 1948 and a minimum of 20,700 in 1949. This was due primarily to the partial unemployment experienced in the United States in those years and secondarily to the restrictions imposed by the Mexican Government to prevent workers from going to districts where there is racial discrimination against Mexicans. From August 1949 to August 1950, as a result of military preparations in the United States, emigration again rose and reached a peak of 129,000 exceeding the average for the war years.

In addition to the emigration recorded in official statistics, the flow of illegal emigrants or wetbacks has continued. This type of emigration is estimated to have more or less equalled, and in 1948 and 1949 to have exceeded, legal emigration.

The significance of occupational mobility in the development of Mexico

An attempt will now be made to analyze the significance of the population movements described above in the recent economic development of Mexico.

Mention should first be made of the causes of mobility, including vertical mobility -- from less to more remunerative occupations/^{and} within each occupation from lower to higher positions -- and horizontal mobility from low to higher income areas. The principal factor is the inequality in the distribution of income which is attributable partly to the social structure of the country but is due principally to the difference of productivity between the traditional economy of the rural areas and the modern economy of the towns. A second factor is the proximity of the United States and the resulting ease of access to technical progress and higher standards of living for large numbers of the population. Finally, the development of communications facilitates geographical mobility both in the interior of the country and towards the northern border.

The demographic mobility resulting from these factors has various effects^{together with inflation,} In the first place, it contributes to the lowering of real wages in all occupations, as can be seen from the following figures; from 1939 to 1947, real wages in industry fell 27 per cent, and only in 1948 and 1949 was some of the lost ground regained, with the recovery in 1949 of 5 per cent over the 1947 level. At the present time the level is again falling. It should, however, be noted that the average real wage of the working population has increased,^{1/} because of the shift from less to more remunerative occupations and of promotion to higher positions in each occupation.

1/ The following example shows how it is possible for an increase in the weighted average real wage in all occupations to occur even if the average for each occupation declines. Assuming that there are only two occupational groups, agriculture and industry, that the average wage in industry is 8.5 times higher than the average wage in agriculture and that in the base year agriculture absorbs 65 per cent of the employed population and industry 35 per cent, the situation in the base year will be as follows:

<u>Year A (base)</u>			
<u>Occupational group</u>	<u>Percentage of total employment</u>	<u>Rate of wages</u>	<u>Real Wages</u>
		<u>(agriculture=100)</u>	
Agriculture	65	100	100
Industry	35	850	100
Totals and averages	100	363	100

/It should

It should also be noted that excessive mobility of labour tends to create seasonal or regional shortages in some of the less well-paid occupations more subject, for geographical or other reasons, to occupational transfers. This occurs in the case of farm labourers in some border areas, women engaged in domestic work and also, at a different level, technicians employed by the State and industry. Excessive mobility also tends to reduce efficiency because of the ^{constant} re-adaption of workers to new employment or to group work. There is also wastage of productive resources in the form of excessive transport and installation costs, working days lost on this account etc. There may also be physical losses of production, as in

Footnote continued

the
Assuming that after a certain period/occupational distribution of the population has changed, so that only 55 per cent is engaged in agriculture, and that real wages in agriculture have fallen 5 per cent and real wages in industry 15 per cent, the situation will be as follows:

<u>Year B</u>			
<u>Occupational group</u>	<u>Percentage of total employment</u>	<u>Rate of wages (agriculture in base year =100)</u>	<u>Real Wages</u>
Agriculture	55	95	95
Industry	45	729	85
Totals and averages	100	381	105

It can be seen that in this arbitrary example the average real wage in all occupational groups has increased by five per cent notwithstanding the decline of five and fifteen per cent in each group considered separately. The figures used in the example roughly reflect the changes in the occupational distribution of the Mexican population in the last ten years and the differences of productivity between agriculture and the rest of the economy. The declines in real wages are, however, fictitious since the real declines cannot be accurately determined owing to a lack of data for proper weighting.

the case of crops which cannot be harvested for lack of labour.

The proximity and ease of access to the United States afford large numbers of the Mexican people an opportunity to learn new, although still rudimentary, techniques and new ways of life. Many of the techniques learned abroad cannot be applied in Mexico owing to the peculiarities of the geographical environment, the insufficient development of other stages of the productive process of which they form part and, more especially, the lack of capital. The process of readaptation to their old employment and, even more, to former consumption habits, is such that large numbers ^{of immigrants} of rural origin do not return to underemployment in agriculture but join the urban labour force. Whether this group is absorbed by industry and services or joins the ranks of the urban underemployed depends upon the rate of capital formation. In addition, to prevent a decline in the standard of living in the areas of demographic attraction the rate of capital formation must be maintained at a level higher than that of the growth in population, the magnitude of which was indicated in the first section of this chapter.

It is not surprising therefore that some Mexican economists have attributed the inflationary character of recent economic development in Mexico mainly to the need for increasing the rate of capital formation above the rate of population increase and to the fact that domestic savings and the flow of foreign capital are not sufficient to achieve this objective. Inflation, in turn has intensified occupational mobility to such an extent that the loss of productive effort and the formation of bottlenecks are increasing the cost and inefficiency of inflationary development.

/TRENDS OF

TRENDS OF NATIONAL AND PRODUCTION INCOME

National Income

The national income at factor cost was 22,800,000 pesos in 1948, 25,600,000 pesos in 1949 and about 30,000,000 pesos in 1950 (preliminary estimate). This increase is only to a very slight extent the result of currency expansion and for the most part reflects the increase in real income. If the figures given are adjusted to allow for the rise in prices, the increase in real income was 2.4 per cent in 1948, 2.4 per cent in 1949 and 6.8 per cent in 1950. The per capita income at current places rose from 945 pesos in 1948 to 1,194 pesos in 1950. This means that the average rate of increase in real terms was 2 percent in the period 1948-1950. In 1950 the real per capita income was 23 per cent higher than in 1939.

It is difficult to estimate the changes in the distribution of the national income during the period under review. The relative share of labour has probably remained stationary in view of the easing of inflationary pressure during these years. As regards the distribution of income by activities, it is likely that industry's share has substantially increased as the average rate of increase of industrial production is almost twice the increase in real income; further, the rise in industrial prices has been relatively greater than the general index.

No estimate of the gross national product is as yet available in Mexico. The greatest difficulty is the lack of reliable data regarding the volume and value of the output of goods and services, as will be shown in greater detail when the trends of agricultural and industrial production are analyzed. In Mexico the money income of the various factors of production can apparently be more easily determined than its equivalent in terms of goods and services. It is also impossible to estimate the gross national product on the basis of income at factor cost in the absence of an even approximate idea of the annual depreciation of productive equipment due to the lack of figures regarding the depreciation charges of industrial undertakings and the fact that the value of the capital goods existing in Mexico is not known.

/It is also

It is also difficult to estimate Mexico's total gross annual investment. The Department of Financial Studies of the Nacional Financiera has prepared a statistical series on the value of gross investment. The figures may be underestimated as they do not include payments to labour on account of the installation and placing in operation of imported capital goods. On the other hand, some duplication may result from the inclusion of some imports of capital goods under the heading of construction. Net investment cannot be ascertained since, as already noted, the amount chargeable to annual depreciation of existing equipment is not known. It may, however, be said with a fair degree of certainty that net investment bears a high proportion to the total since the volume of new investment is large in relation to existing productive equipment. On the other hand, the effects of the very rapid depreciation of many imported goods such as trucks, road-building machinery and the like, which in Mexico are subjected to very hard use, must be taken into account. It is estimated, for example, that a truck used for the transport of construction material in public works schemes lasts only a year and a half.

Subject to these reservations, it may be said that total gross investment was 3,300 million pesos in 1948, or 14 per cent of the national income. The distribution of total investment by activities is not accurately known. It can be said, however, that public investments represented 30 per cent of the total gross investment in 1948. Public investments in 1949 were 675 per cent of 1939. In comparison real investment in industry in 1949 was twice the level of 1939. In the case of industrial investment, it is estimated that approximately 20 per cent was used for the construction of factories to turn out goods not previously produced in Mexico, 24 per cent for the construction of new plants for the manufacture of goods already being made in the country and 56 per cent for the expansion of existing factories.

Mexico is still in a stage of development in which a very high proportion -- perhaps more than half -- of annual investments is applied to the construction, expansion and repair of its transport and electric power systems, which are prerequisites of industrial development and the transformation of agriculture.

/The high

The high level of investment was the determining factor in the rapid expansion of the national income described above, both from the point of view of the real increases in production, and more especially of the money payments accruing to the factors of production and the changes in their share in total income. In this connexion, the volume of investments and the manner in which they have been financed are equally important. As will be described at greater length in later sections of this report, the volume of domestic savings continued, in the first part of the period under review, to be insufficient to finance investment. However, in the most important sector of capital formation, the State deficit financing ceased. Mexico has apparently now reached a stage where it can maintain the rate of investment of the last ten or fifteen years without running the risk of inflation of domestic origin.

Trends in Agricultural Production.

From 1948 to 1950, according to estimates made by the Secretariat of Agriculture, the harvested area increased by 13 per cent to 8.5 million hectares. The increase was due to the opening up of new irrigated (25 per cent) and non-irrigated (75 per cent) lands as a result of the completion of some of the largest government irrigation schemes, the construction of roads and the increase in loans for land clearing.

Agricultural production increased substantially as a result of the expansion of the area under cultivation and higher yields. The greatest gains were made by export crops in response to increased foreign demands. In the extreme case, cotton production doubled from 1948 to 1950 to almost three times the 1946 level. The production of foodstuffs for home consumption also increased. The production of maize, for example, rose by more than 10 per cent during the two years, and that of wheat and beans by more than 20 per cent.

The high level of investment and consequently of income stimulated demand and consumption. There was a slight change in the pattern of food consumption, due in all probability to the displacement of farm workers from agriculture to other employment. So long as total investment is maintained at a high level and the changes in the pattern of agricultural production follow

/the present

the present trend towards the expansion of production for export rather than for home consumption, the increases will only partially solve the problem of supplying the home market with certain foodstuffs. The stimulus received by agriculture for export and the uncertainty associated with agriculture for local consumption have increased the need for imports of some agricultural products (wheat, edible fats).

Agricultural prices showed a general upward trend which was very marked in the case of certain export crops. In the case of foodstuffs, the relative stabilization of income, the inelasticity of demand and increased production prevented prices from rising at the same rate as the prices of export products or the general price index.

Investment in agriculture for export was much higher than investments for the production of foodstuffs for the home market. In the case of the former, large sums were expended on irrigation works, the importation of machinery and loans while the latter was the object of relatively modest expenditure applied mainly to the improvement and distribution of seed. The work of the Maize Commission deserves particular mention in this connexion.

The volume of loans granted by semi-official and private banks has increased by approximately 150 per cent since 1948. Nevertheless, a considerable proportion of agricultural credit is provided by individuals who lend money privately at usurious rates of interest, a circumstance which impedes capital accumulation in traditional agriculture. Although the official policy is to encourage credit for the production of foodstuffs, the increase in demand and the rise in prices on the world market have diverted the flow of credit, (including credit furnished by official institutions) towards the financing of agriculture for export.

Trends in Industrial Mining and Production

(a) Industry. From 1948 to 1950 the volume of industrial production increased at an average rate of 11 per cent a year, and it is estimated that in 1949 it had reached rather more than twice the 1939 level although the available indices show an increase of a little over 70 per cent. In the same period the productive capacity of manufacturing installations was approximately quadrupled. This is a natural tendency in a rapidly developing economy in which the rise in demand is fast and the most serious obstacle to progress is rather the inadequacy of existing equipment in relation to requirements. The extent

/and distribution

and distribution of investments in industry has already been discussed in the section on national income. As regards employment in industry, it is likely that the population census for 1950 will show an increase in the number of persons engaged in industry of more than 50 per cent over the previous census although the available indices show an increase of only 25 per cent over 1939.

Having noted the principal quantitative aspects of the recent industrial development of Mexico, we may now discuss the qualitative significance of the process.

It is evident that manufacturing processes are being greatly improved owing in large measure to the increase in the numbers and efficiency of the technical staff. It is interesting in this connexion to observe the steadily increasing part being played by Mexican technicians in the management of industry and in the adoption and improvement of production methods. The progress achieved is naturally resulting in the improvement of the quality of Mexican products.

Another important feature of recent industrial development is the introduction of new lines of products. Mexico is now producing goods, such as artificial silk, electrical equipment, numerous chemical products etc., which five or six years ago had to be imported in their entirety. The most spectacular event in the introduction of new industries has perhaps been the development of the meat packing industry since 1947.

The appearance of new branches of production has resulted in better integration of industry. At the present time, many industries producing consumer goods which formerly imported their raw materials are now supplied by newly established Mexican enterprises; in many cases also, Mexican raw materials are being used for the manufacture of consumer goods which were not produced previously. This trend towards integration may also be regarded from another point of view, as a process of orderly industrial growth, since there does not seem to have been any great disproportion between the growth of the consumer goods industries and the capital goods industries. On the other hand, the sources of finance for the two types of industry have been fairly sharply differentiated since the capital goods industries have been developed by the Nacional Financiera, making use of its own resources and international credits, while private investment has been channelled towards the consumer goods industries.

The years 1948-1950 were also marked by the consolidation of war-time industrial development. Investments and industrial activity no longer have the speculative character which prevailed in the period 1942-1945. Industrialists are steadily improving their knowledge of the markets and they realize the need for research regarding their present size and future possibilities. Productive capacity is being increasingly utilized in industries established in previous years, and the investments now being made are being planned more carefully. As a result, the financial position of Mexican industry is today fairly sound. The process of consolidation has been assisted by higher tariffs, devaluation and import restrictions which have protected Mexican industry from foreign competition. In some branches of industry, however, the restrictions on the importation of similar foreign products have resulted in higher prices and profits rather than in the expansion of production, which is undoubtedly due to the virtual monopoly enjoyed by the industries concerned.

(b) Mining. In 1948 and 1949, under the combined stimulus of high prices abroad and the devaluation of the peso, the production of industrial metals continued the recovery which began in 1947 after the decline following the end of the war. Devaluation to a very great extent cushioned the sharp fall in prices that occurred in the second half of 1949. Foreign demand again revived in 1950, especially after events in Korea.

As regards volume, the indices for the period September 1949-August 1950, the year of greatest production being taken as the base year in each case, are as follows: lead 87, zinc 104 and copper 75. In 1946, the year of lowest production in the post-war period, the indices were lead 49, zinc 64 and copper 76.

Among the various metals mined, silver has continued to present a special problem. In the twelve month period September 1949-August 1950, the volume of production was 70 per cent of the 1940 level. During the period under review, the Bank of Mexico has followed a silver policy based on the control of exports and of non-monetary domestic consumption and the minting of silver to meet domestic requirements and for export to various Asian countries (Saudi Arabia, Iraq, Lebanon, Syria and China). Towards the end of 1950

/the Bank

the Bank of Mexico had to reduce the volume of silver it offered on the international market. This action was a determining factor in the subsequent rise in the price of silver, which in early 1951 was quoted on the New York market at 0.90 dollars per troy ounce.

Despite the rise in prices and production and the fact that mineral exports have recovered much of their pre-war relative importance, the part played by mining in the Mexican economy continued to decline during the period under review.

(c) Oil. During the period covered by this survey oil production rose from 55.3 million barrels in 1947 to 60.9 million barrels in 1949. The production of derivatives was 50.5 million barrels in 1949, compared with 48.8 million barrels in 1947. It should be noted that the production of derivatives in 1949 was 60 per cent higher than in 1938. Mexico refines a very high percentage of the oil it produces. In 1949 the proportion was 83 per cent but had reached a peak of 98 per cent in 1943.

Oil continues to be absorbed in increasing quantities by the home market. Although the average consumption of the years 1947-1949 was only 75 per cent of total production and thus slightly less than the wartime average of a little over 80 per cent, this is due principally to the rapid increase in production and to the improved export market. The per capita consumption of oil derivatives rose from 1.2 barrels in 1938 to 2.2 barrels in 1949, an increase of over 80 per cent. The increase in consumption is due partly to industrial expansion, although the chief factors have been the development of communications and the growing use of farm machinery and domestic appliances burning oil derivatives.

During the period under consideration, exploration and drilling operations continued over an area of more than 185,000 sq. kms, more than 55 per cent of which is situated in the Gulf of Mexico region. As a result of prospecting operations, proved reserves in September 1950 were estimated at 1,270 million barrels, 81 per cent being accounted for by the Poza Rica and three adjacent fields. There are indications that there is a field in the Vera Cruz area containing larger reserves than Poza Rica, which would radically change the perspectives for the development of the Mexican oil industry, in view of the fact that the present policy of Petroleos Mexicanos is to maintain a safety margin of twenty reserve barrels for each barrel extracted.

Two recent events in the Mexican oil industry deserve special mention. The first is the discovery of natural-gas fields in the northeast near Reynosa; these are being used to good advantage in the agricultural and industrial development of the States of Nuevo León, Tamaulipas and Coahuila. The second is the completion of two new refineries; the Salamanca refinery, in the Bajío agricultural region, which will meet the fuel needs of the entire central area of the country; and the Reynosa refinery, situated near the oil and natural-gas fields already mentioned. The Salamanca refinery was completed early in 1950, and the Reynosa refinery was virtually completed towards the end of the year.

Notwithstanding the discovery of new natural-gas deposits, the Poza Rica field still accounts for more than 80 per cent of Mexico's existing reserves. These reserves will be more fully utilized with the completion of the pipe line connecting the field with the Atzacapotzalco refinery in the vicinity of Mexico City.

Trends in Energy Production

From 1948 to 1950, 673 million pesos were invested in electric generating systems. Of this amount, 51 per cent was obtained through loans made by the International Bank for Reconstruction and Development and the Export-Import Bank, in favour of the Federal Electricity Commission and the Compania de Luz y Fuerza Motriz, S.A. As a result, installed capacity was increased from 820,000 kilowatts in 1948 to 1,150,000 kilowatts at the end of 1950. Output increased from 3,300 million kilowatt hours in 1948 to an estimated total of 3,750 million kilowatt hours in 1950.

On the basis of foreseeable consumption trends, there must be a considerable increase in the output of electricity during the next five years if the development of the country is to continue at its present rate. Consequently, a high proportion of the country's investment in the next five year period will have to be devoted to the construction and expansion of electric systems.

In the consumption of power generally, oil is becoming increasingly important due to the development of sea, land and air transport and the gradual mechanization of agriculture. According to a survey by the United Nations Economic Commission for Latin America now in preparation, 64 per cent of the

/mechanical

mechanical energy used in 1930 was derived from the combustion of oil and oil derivatives; in 1940 the figure rose to 71 per cent and in 1950 to 75 per cent. Coal, on the other hand, dropped from 18 per cent in 1930 to 8 per cent in 1950. The share of water power increased slightly from 9 to 11 per cent but in absolute terms was more than doubled during the twenty year period. It is estimated in the survey mentioned that the consumption of mechanical energy rose from 10,645 million kilowatt hours in 1930 to 13,169 million kilowatt hours in 1940 and 21,660 million kilowatt hours in 1950. It is also estimated that the proportion of mechanical to total energy utilized rose from 78 per cent in 1930 to 82 per cent in 1950.

Development of Transport

In recent years there have been several outstanding developments in the railways. The most important of these was the construction of the Ferrocarril del Sureste which connects the Yucatan peninsula with the rest of the country. In addition to its political importance as a means of effecting the unification of this important area with the national community, the new railway is of very great economic significance since it will make possible the utilization of the natural resources of Tabasco and southern Campeche, which is perhaps one of the richest parts of the country. The region also possesses the best system of navigable waterways in Mexico and the completion of the Ferrocarril del Sureste and of the Pan-American Highway, to which reference will be made later, will make possible the integration of a system of land and river transport in an area where communications facilities were previously among the worst in Mexico. In addition to the completion of this railway and the opening of a new line between Sonora and Lower California, the narrow gauge track on the Ferrocarril Interoceanico between Mexico City and Vera Cruz and that of the line running between Mexico City and Acambara in the Bajio agricultural region has been widened to standard gauge. The programme of railway rehabilitation has also been continued energetically in recent years and includes the improvement of fixed installations, the substitution of heavier rails for those now in use and the increasing employment of diesel locomotives.

/The volume

The volume of goods traffic carried by the Ferrocarriles Nacionales was 14.7 million tons in 1949 and 15.5 million tons in 1950 as against 9.8 million tons in 1939, i.e. an increase of 60 per cent.

The most important development with regard to roads was the completion in 1950 of the Pan-American Highway from Ciudad Juarez on the border with the United States to Ciudad Cuauhtemoc on the frontier with Guatemala. The highway is 3,400 kilometres long, and its southernmost section has served to provide communications with most of the State of Chiapas, which at the present time is one of the most promising regions in Mexico for the purposes of tropical and sub-tropical agriculture. During the past three years there has been a change of emphasis in the objectives of Mexico's highway policy. Although the importance attached to the building of trunk highways is undiminished, considerable attention has been given to the construction of local roads which will serve to integrate even the smallest communities in the national market and the social life of the country. A sum of approximately 700 million pesos was spent for road construction during the period 1948-1950.

It was estimated that the theoretical capacity of the motor trucks operating on Mexican highways in 1947 was 22,000 tons a day and that it was increased by approximately 30 per cent during the following three years. The extent to which this capacity is used, i.e. the tonnage transported can not be estimated, even approximately, because of the multiplicity of transport undertakings and the diversity and irregularity of the services they provide.

In 1949 the Mexican and foreign airlines operating domestic and international services carried more than 900,000 passengers, or 10.5 times as many as in 1940. In the same period the volume of air freight increased six times.

In order to facilitate the distribution of oil and oil derivatives, pipelines were constructed from Poza Rica to Salamanca and from Minatitlan to Salina Cruz during the period covered by this survey. The first 450 kilometres long, will supply crude oil to the refinery mentioned in the preceding section. The second, 247 kilometres long, will cross the Isthmus of Tehuantepec and, together with Pemex tankers, will help to meet the needs of the Pacific area.

FINANCING OF DEVELOPMENT BEFORE DEVALUATION

Over-investment in 1947 and 1948

It was noted earlier that the economic development of Mexico in recent years has been characterized by an excess of capital formation over savings, which is closely linked with the growth of the population. In the years 1946, 1947 and 1948 this tendency became particularly marked. The difficulty was not a disequilibrium between current savings and investment, but the inadequacy of the resources accumulated during the war years to meet the requirements for the expansion and replacement of productive equipment which had accumulated during these years. This was the case in both the private and the public sectors, although the latter was probably more seriously affected.

Most of the savings accumulated during the war were represented by the increase in the reserves of the Bank of Mexico, which had risen to a peak of 390 million dollars at the beginning of 1946 and fell in the course of the next two and a half years to 42 million dollars.

Effects on money income and the balance of payments

The loss of reserves tended to contract the volume of money in circulation, but this was to some extent offset by an increase in the velocity of circulation and the relaxation of credit restrictions. The volume of money in circulation fell from 3,515 million pesos in December 1946 to 3,493 million pesos in December 1947 and rose to 3,614 million pesos in July 1948. This was reflected chiefly in the reduced activities of certain industries, such as building, which declined significantly in Mexico City in late 1947 and early 1948. In addition, there was a falling off of activity in certain industries -- such as textiles -- which had found foreign markets during the war and which were faced by a sharp fall in external demand from abroad at a time when domestic demand was also falling.

This all tended, moreover, to stabilize the price index throughout 1947 and the first six months throughout 1948.

International credits

One possible solution of the balance of payments problem in these years would have been to obtain a volume of foreign credits sufficient to compensate the deficiency of domestic savings. A considerable flow of credit to the amount of 35.6 million dollars in 1947 and 18.3 million dollars in 1948 was in fact received, principally from the Export-Import Bank in Washington. These credits, however, were not large enough to correct the disequilibrium on current account and to meet the needs of public and private investment programmes. In order to deal with this situation, loans amounting to a little over 200 million dollars were requested early in 1947 from the Export-Import Bank and the International Bank for Reconstruction and Development. By the middle of 1948, however, none of the loan had been authorized, and it was already clear that Mexico would only be able to obtain a much smaller amount, as will be described below.

The devaluation of July 1948

The loss of reserves resulting from the disequilibrium on current account was accentuated in June and July 1948 by short term capital movements of a speculative character. The combined effect of these two factors had by July 1948 reduced Mexico's monetary reserves to 42 million dollars, representing a loss of more than 300 million dollars since February 1946. In this situation, the financial authorities had no choice but to devalue the peso on 22 July 1948. From that time on, the course of inflation in Mexico changed radically. The deflationary effect arising out of the balance of payments during the two and a half years prior to devaluation should have disappeared as soon as a new parity had been established, as in fact happened in the second half of 1949. The part played by domestic economic policies in dealing with this new situation is analysed below.

THE ECONOMIC POLICY OF ADJUSTMENT TO REVALUATION

Policy Before Devaluation

It may seem strange that the public works construction programme, financed by means of the budget deficit, should have been continued and expanded in 1947-48 at a time when the balance of payments position seemed to call for a balanced budget or a budget surplus. In fact, a balanced budget would certainly have checked, although probably not prevented, the loss of reserves and devaluation might perhaps have been postponed. On the other hand, a balanced budget might possibly have strengthened the deflationary effect of the loss of reserves. Reference was made in the preceding section to the apparent paradox of partial deflation in some economic sectors while inflationary pressures continued. It was in fact because of signs of deflation in private building and other industries that the public works programme was continued and accelerated in order to stabilize the general level of economic activity. Total government expenditure (including local authorities) amounted to 2,643 million pesos in 1947 and 3,050 million pesos in 1948. Of these sums, capital expenditure accounted for 1,010 million pesos in 1947 and 987 million pesos in 1948, i.e. 38 per cent and 32 per cent respectively. The budget deficit (Federal Government only) amounted to 191 million pesos in 1947 and 278 million pesos in 1948 -- figures which are relatively low in proportion to size of public investment.

Changed objectives

After devaluation, and in particular after the new rate of 8.65 pesos had been established, there was no longer any danger of deflationary pressures of external origin. A radical change in the direction of economic policy then became necessary. Henceforward, the stabilization of income had to be achieved not so much by maintaining the rate of development as by trying, by means of a budget surplus, to create a sufficient volume of savings to offset inflationary pressures of domestic origin. Steps had also to be taken to stabilize the domestic price-level in order to take advantage of the protective effects of devaluation to the fullest possible extent and for as long as possible. Moreover, the success of a policy of stabilization would be incomplete if no attempt was made partly to neutralise external inflationary effects by absorbing a portion of the additional profits accruing to exporters from devaluation. Lastly, to ensure proper utilization of the additional savings accruing to the

country from devaluation, it would be necessary, at least in the beginning, to prevent the increased reserves from being used for purposes of consumption.

Methods

The measures taken to achieve these objectives are listed below. In the first place, it was planned to balance the budget, and this was finally accomplished in 1949 when the financial year closed with a surplus of 134 million pesos. The surplus was obtained not by reduction of the public works' programme but by means of a substantial increase in revenue.

Part of the increase in public revenue is associated with the achievement of one of the other objectives mentioned -- the absorption of part of the profits obtained by exporters as a result of the change in the rate of exchange. This was accomplished by the establishment of a 15 per cent ad valorem surcharge on the exports tax, calculated to retain one half of the exchange profits which would accrue to exporters if the peso were stabilized at 6.9 to the dollar. When the rate was stabilized at 8.65 pesos, the proportion of the exchange profits absorbed by the surcharge acted as an anti-inflationary instrument in three ways: (a) by absorbing part of the increase in money income of foreign origin; (b) by increasing government revenue and thus contributing to the budget surplus; (c) by preventing the prices of export goods from rising in proportion to the change in the rate of exchange. In the last four months of 1948, the 15 per cent ad valorem surcharge produced 60 million pesos. In 1949 and 1950, receipts from this source were 368 million and 390 million pesos, respectively, i.e., an average of 12 per cent of federal revenue, a percentage exceeded only by income tax.

A second highly effective means of achieving a budget surplus was provided by the excess profits tax established in 1949 with the double purpose of absorbing the profits of undertakings not liable to other taxes and of encouraging the reinvestment of profits or, what amounts to the same thing, of creating a large volume of private savings. The tax yielded 44 million pesos in 1949 and 60 million in 1950.

In addition to the various measures described, import restrictions were also maintained in order to ensure that the increase in reserves resulting from devaluation was not dissipated by the importation of luxury articles.

As a result of these measures, the balance of payments on current account ceased to be adverse in the second half of 1949.

ADJUSTMENTS AFTER DEVALUATION

In the balance of payments

In the second half of 1949 the balance of payments ceased to be adverse and a surplus of 59.5 million dollars was achieved.

The decisive factor in the change in the balance of payments position was the reduction of imports from 719 million dollars in 1947 to 597 million dollars in 1948, 520 million dollars in 1949 and approximately 500 million dollars in 1950. The reduction was due to the combined effects of devaluation and of the maintenance of import restrictions.

The stimulus to exports furnished by devaluation^{was} to some extent offset by the decline in demand in the United States in 1949. This was reflected in the prices of a number of products, in particular of industrial metals (lead, zinc and copper). In the case of lead, for example, the price fell from a maximum of 0.21 dollars per pound in April 1949 to 0.12 dollars in December 1949. (The downward trend continued to 0.105 dollars in March 1950, but was rapidly reversed in subsequent months). The 15 per cent ad valorem tax, to the extent that it accomplished its internal anti-inflationary purpose, also reduced the incentive given to exporters by devaluation. As a result, increased exports did not begin to contribute to the improvement of the balance of payments position until 1950.

In contrast with its delayed effect on exports, devaluation immediately resulted in a substantial rise in receipts of foreign exchange from the tourist trade. Basically this was due to an increase in the amount spent by foreign tourists in Mexico in 1948 and 1949 as compared with 1947 (although the 1949 figure is below that for 1948). Further, the sums spent by Mexican travellers abroad which reached a peak in 1948 dropped sharply in 1949 by almost 50 per cent, to approximately the 1944 level. As a result of the combined effect of the two factors, net receipts from the tourist trade rose from 82.8 million dollars in 1947 to 104.1 million dollars in 1948 and, 133.7 million dollars in 1949. They are estimated to have exceeded 150 million dollars in 1950.

As was noted in the preceding section, in 1947 and 1948 Mexico had applied for international loans to an amount slightly over 200 million dollars. Credits granted in the second half of 1948, in 1949 and 1950 amounted to 180 million dollars, 75 million dollars of which was used during the same period. Of this figure, 20 per cent is represented by loans, principally for electrification, by the International Bank for Reconstruction and Development, and 60 per cent by loans from the Export-Import Bank.

The devaluation of July 1948 and more particularly the stabilisation of the peso in June 1949, naturally put an end to short-term speculative exports of capital.

Changes in the composition of foreign trade

Besides the reduction in imports and the delayed increase in exports following devaluation, the latter, in association with other factors, tended to change the composition of both imports and exports. The principal changes in 1948 and 1949 are described below.

In the case of imports, devaluation not only succeeded in reducing their absolute volume, but, what is more important, in changing their composition in favour of home production. Thus, while capital goods and raw materials for industry constituted 61 per cent by value of all items imported in 1946 and 1947, the proportion rose to 69 per cent in 1948 and 1949. Consumer goods and food-stuffs, on the other hand, dropped from 35 per cent in 1946 to 23 per cent in 1949.

In the case of exports, it should be noted that in the period 1947-1948, the wartime trend towards a relative increase in exports of manufacture as compared with mineral products and oil was changed while industrial metals and oil accounted for 26 per cent of all exports in 1946, but they had risen to 59 per cent in the first nine months of 1950. Industrial products, on the other hand, had dropped in the first nine months of 1950 to 11 per cent of all exports, as against 27 per cent in 1946. Throughout the period agricultural products accounted, on the average, for one-third of the total value of exports. In view of the development of the cultivation of export crops, it may be asked whether this trend will continue and whether mining products and oil will in the future be able to regain the important place they occupied in Mexican exports until ten years ago.

It has already been pointed out that devaluation had little or no effect in increasing the value of exports which actually declined in 1948 - 1949 as against 1947, and which only began to regain the 1947 level in 1950. Similarly, devaluation was not a decisive factor in the changes in composition mentioned earlier except in so far as it softened the impact of the fall in metal prices in 1949. In the case of agricultural products, the decisive factor in the increase in exports is the fact that prices abroad have risen much higher than those of other commodities.

Changes in Prices

Until mid-1950, prices had risen only 29 per cent above the level of July 1948 in comparison with the 78 per cent rise of the dollar. The slow adjustment of prices to the new exchange rate is due to the factors analysed below.

From the point of view of supply, some factors acted directly on prices while others affected them through production costs. Among the former, mention should first be made of the accumulated stocks of imported goods which had been acquired before the devaluation of the peso and were in excess of immediate market requirements. Further, the prices of foodstuffs -- to which a very heavy weight is attached in the general index -- fell slightly as a result of the considerable increase in agricultural production in 1948 and the low elasticity of demand for foodstuffs.

The accumulated stocks of imported raw materials and the acquisition of machinery at the old rate of 4.85 also influenced production costs. Another factor was the fall in United States prices which occurred in the second half of 1948 and became more pronounced in 1949 and which was particularly marked in the case of raw materials, machinery and equipment. The virtual freezing of wages from the middle of 1948 until the end of 1949 also helped to keep costs relatively low.

Another factor which influenced production costs and delayed the adjustment of prices to the new exchange rate was the steadily increasing utilization of the productive equipment of many undertakings which had been working far below capacity.

From the point of view of demand also, a number of factors tended to delay the adjustment of prices to the new exchange rate. Among these, the budget surplus referred to earlier may be regarded as the most important factor restraining effective demand. Further, as indicated earlier, the 15 per cent ad valorem tax tended to narrow the difference between the domestic and foreign prices of export goods, to limit the effect of external demand on the home market and to reduce the effect of increased exports on the expansion of money income. Lastly, the freezing of wages, which, from the point of view of supply, was effective in keeping down costs, was an even more powerful force in the stabilization of effective demand.

/IMMEDIATE

IMMEDIATE PROSPECTS

Expansion of external origin since June 1950.

The monetary expansion of external origin that began when the rate of exchange was stabilized at 8.65 pesos in the middle of 1949 has been proceeding at a much faster pace since July 1950. While monetary reserves increased by 59.5 million dollars in the second half of 1949 and by 10.7 million dollars in the first six months of 1950, the increase from July to December 1950 was over 100 million dollars. It may be useful to examine the reasons for this sudden increase in reserves and to consider what effect this expansion will have on the economic development of Mexico in the immediate future.

The recent increase of reserves had been influenced by (a) the rise of prices in the United States, which has been particularly marked in the case of many Mexican exports, such as metals, the prices of which fell in 1949 but have returned to or exceeded the highest levels reached at the beginning of that year; (b) the boom in the tourist trade, which accounted for 150 million dollars in 1950 and was particularly heavy in the summer and autumn of that year; (c) the resumption of the flow of migratory workers to the United States, especially during the second half of 1950; and (d) most important, the substantial influx of short-term capital, principally for speculative reasons, including the hope of a possible revaluation of the peso. The monthly average of such capital movements rose from 3 million dollars in the first six months of 1950 to over 10 million dollars in the second half of the year.

The effect of the increase in reserves on money income is making itself felt in a number of ways. One of these is the new boom in private building comparable to that of 1944 and 1946. The principal effect, however, of the increase of money income is on prices, which, as explained in an earlier chapter, had been rising relatively slowly since the abandonment of the exchange rate of 4.85 pesos in July 1948. In the second half of 1950 the wholesale price index rose 31 points, or 11 per cent, as against the rise of 17 per cent during the two preceding years.

It is obvious that in the present situation the principal source of inflationary pressure is the favourable balance of payments position. Domestic private investment and, to a lesser extent, wages are, however, continuing to exert an influence in the same direction.

Programmes of industrial expansion today call for relatively larger sums, since the cost of imported equipment has risen considerably and working capital must be increased in proportion to the general rise in prices and costs.

The upward pressure of wages which, as noted in the preceding section, remained latent after devaluation, has been expressed in the form of frequent and bitter labour disputes.

Relative effectiveness of various anti-inflationary measures.

Having noted the principal sources of inflationary pressure, we may examine the instruments used to deal with them.

In the first place, the policy of budget surpluses, or of public savings, has been continued and seems likely to become a feature of Mexico's economic development, at least in its present phase. The efficacy of this policy as an anti-inflationary measure has been demonstrated during the past two years, but it can be said that under present conditions its possibilities are fairly limited. This is apparent if the size of the surplus in the last financial year (about 200 million pesos) is compared with the rate of increase of the monetary reserve. If the necessary steps were taken, public savings could be considerably increased either by a reduction of the public works programme or by far-reaching fiscal reform. Neither step seems feasible at the present time, and a reduction of public works is, of course, regarded as undesirable.

The second anti-inflationary measure that must be considered is the relaxation of import restrictions. Since the balance of payments position is at present the main factor making for expansion, the great importance of this method is obvious. Two limitations must, however, be borne in mind. The first is the time at which it has been put into effect, which coincides with a period of pre-war shortages in the United States and Europe and consequently with high prices, priorities, export licences and other obstacles. The second is the fact that while the easing of import restrictions has an anti-inflationary effect from the point of view of income, the same cannot be said of its effect on prices and costs, since (a) in the general index very little weight is attached to goods subject to import prohibitions or restrictions; (b) in most cases, their prices have risen by over 78 per cent (the difference between the 4.85 and 8.65 rates of exchange), i.e. by much more than the 29 per cent rise in the general index; and (c) United States prices are rising. Further,

/the relaxation

the relaxation of quantitative import restrictions has been largely offset by the tariff increases resulting from the termination of the Trade Agreement between Mexico and the United States. The Agreement, which had been in force since 1932, was denounced by both parties in the middle of 1950. As provided in the Agreement, the denunciation became effective at the end of 1950. In view of the favourable situation with regard to foreign demand, Mexican exports will probably not be affected by the denunciation of the Agreement.

The most effective anti-inflationary measure ~~now available~~ ^{the} ~~is perhaps~~ ^{new} system of credit controls which were introduced towards the end of 1949 and were given full effect in January 1951. In April 1950 the Bank of Mexico issued circular No. 1108 bis to all deposit banks in the country raising reserve requirements to 100 per cent in respect of all deposits over the level of September 1949. The circular provided, however, that up to 70 per cent of the increase in deposits might be used for investments in public and private securities, and even for agricultural loans for terms exceeding one year, and that a small percentage might be freely invested by the banks. In this connexion, it should be noted that long-term credit and investment also have an expansionist effect on income, since to the extent that resources are directed towards investment, a source of inflationary pressure will continue to exist. In January 1951, a new regulation came into force under which the increase in bank deposits was almost completely frozen. Despite the restrictions now in force, it is likely that the demand for credit by industrial undertakings will continue to grow to the extent that operating costs continue to rise, thus requiring increasingly large working capital; in addition credit will be required for the expansion of undertakings and for securing supplies of raw materials in the present emergency situation. This will certainly lead to a gradual relaxation of present restrictions (which are already flexible as regards the importation of raw materials and machinery).

Finally, emergency legislation promulgated in December 1950 gave the executive authority power to intervene in the fixing of prices and the distribution of goods in order to alleviate the rise in the cost of living. Under this legislation, the prices of a number of essential articles, including milk, maize, flour, edible oils, soap etc. were frozen in January 1951, and new distributive machinery (travelling markets, shops for public employees) was set up. Experience has shown that price fixing which is not accompanied by a

system of rationing leads to the creation of black markets. On the other hand, any attempt to correct the deficiencies of the distribution system involves comparatively long-term measures since it presupposes important changes in the structure of production, the system of transport and storage, in the occupational distribution of the population etc. For these reasons, efforts to lower prices by improvements in the distribution system are usually ineffective. Moreover, any attempt to influence distribution and prices directly, especially by means of subsidies, tends to convert active inflation into latent inflation. This may be desirable if effective measures are at the same time taken to deal with the basic causes of the inflationary situation.

Probable effects of the international situation on domestic development.

It was pointed out earlier that the principal source of inflationary disturbance is external. It is therefore desirable to consider the probable effects of the present international situation on the immediate course of developments and its inflationary or non-inflationary character. It is in the first place certain that the foreign demand for Mexican products will continue to increase. It is also likely that the availability of capital goods and of raw materials required for domestic industrial production will be affected by the mobilization of the United States economy for defence. Moreover, as was noted in the earlier section, the demand for Mexican labour in the United States will certainly continue to rise and will help further to improve the favourable balance of payments. In special cases it will result in labour shortages. The present international situation may to some extent lessen the possibility of obtaining foreign loans, which would, however, be of less value than previously if the difficulties regarding the importation of equipment are not reduced.

/SUMMARY

SUMMARY

The principal economic event in Mexico during the period between 1947 and the middle of 1950 was the termination of the inflationary process which had lasted for more than ten years. At the same time, the industrial and agricultural development achieved during the ten year period was in large measure consolidated. In other words, the rate of growth of money income was adjusted to the rate of growth of the real production of goods and services. The liquidation of inflation was brought about, on the one hand, by factors which tended to stabilize monetary income and, on the other, by a considerable increase in real income largely resulting from investments made during the years of inflation.

The stabilization of money income occurred when the factors that had caused its rapid expansion during the ten preceding years ceased to operate. Two of these factors arose from the need to raise the rate of capital formation above the rate of population increase. They were deficit-financed public investment and an excess of investments over savings (ex-ante) in the private sector. During the war the very favourable balance of payments was a further factor.

The expansionist effect of the balance of payments was the first to disappear when the balance of payments position changed in 1946, leading to the devaluation of the Mexican peso between July 1948 and June 1949. The fifteen percent ad valorem surtax on exports also operated as a factor neutralizing expansion of external origin.

Domestic inflationary factors also disappeared when the equilibrium between savings and investment was restored in both the government and the private sectors. This occurred in the government sector as a result of the policy of budget surpluses, established in 1948 and carried out in 1949 and 1950; in the private sector it was brought about by credit restrictions, by fiscal measures encouraging the reinvestment of profits and by the reduction of the consumption of imported goods obtained by direct restrictions and as a result of devaluation.

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In the elimination of inflation, the increases in agricultural and industrial production and the progress made in the transportation and distribution of goods were perhaps more important than the neutralization of the factors making for monetary expansion.

Until mid-1950, Mexico seemed to have reached a stage where it could maintain the rate of development of the previous 15 years without running the risk of inflation of domestic origin.

However, since the middle of 1950 the Mexican economy has been subject to new inflationary disturbances of external origin as a result of events in Korea. The favourable balance on current transactions with foreign countries has considerably increased and in addition there has been a substantial influx of short-term capital.

In order to meet the new inflationary situation, efforts are being made to offset the effect of the increase in receipts of foreign exchange by means of budget surpluses, the almost complete freezing of credit and direct measures to control prices and distribution. Since this new inflationary situation is of external origin, it must be emphasized that the Mexican economy's ability to resist inflation and its prospects for economic development will be conditioned by: (a) the availability of imports and the trends of import prices; (b) the extent to which productive resources are diverted to exports; (c) the extent to which the emigration of labourers to work abroad and the resulting receipts of foreign exchange influence real national production and the purchasing power of the population; (d) the possibility of importing equipment.

APPENDIX 1.
AGRICULTURAL PRODUCTION

National Income and Agricultural Income

According to the figures of the Banco de Mexico S.A., the national income in 1948 was 22,800 million pesos of which 20 per cent or 4,560 million, was income derived from agriculture, stockraising, fishing and forestry. Agriculture's share has thus increased, since in 1938 according to the estimates of the Directorate-General of Statistics, it was only 17 per cent of an income of 5,323 millions, i. e. 910 million pesos. While the national income increased 4.8 times during a ten-year period, agricultural income increased 5.7 times.

Population engaged in agriculture in relation to the total gainfully employed population

The 1940 census showed that approximately 65 per cent of the gainfully employed population was engaged in agriculture, stockraising, forestry, hunting and fishing. The estimates available for 1950 indicate that during the last ten years the proportion of the gainfully employed population engaged in agriculture and similar activities declined to between 55 and 60 per cent. 1/

It is evident that the increase in the population engaged in industry and services has been principally achieved by the displacement of the agricultural population. This indicates that the policy of industrial development is beginning to have an effect and that the country's economy is decisively embarked on the process of transition towards a more advanced structure.

On the basis of empirical information and of general observations, an approximate idea can be obtained of the process by means of which industry absorbs the additional labour.

The shift of the agricultural population to other activities may be due to the following causes:

(a) Changes due to the increase in size of the rural family in relation to the economy of the farming unit.

(b) The

1/ The previous estimates are based on the study of urban growth and on the expansion of certain activities during the period under review.

- (b) The attraction of urban centres.
- (c) Seasonal migrations to other areas of agricultural employment, resulting in changes in employment.
- (d) The establishment of industrial enterprises in rural areas.
- (e) Increased demand for domestic services in urban centres.
- (f) Attraction of the United States of America.

As the transition from agriculture to industry is due to causes which act simultaneously, the foregoing classification naturally cannot be applied in a hard and fast manner.

As the rural family increases in size, the problem of consumption and the utilization of the additional labour can be solved in the following ways:

- (a) Reduction of the per capita consumption of the members of the family.
- (b) Application of the available labour to the intensive farming of the agricultural unit.
- (c) Employment of the surplus members of the rural family in other activities.

The first two solutions are characteristic of an under-developed economy, where agriculture is of the subsistence type. Both lead inevitably to a high density of population, with little capital and intensive methods of agriculture. The small size of the agricultural unit (minifundio) among farmers with a low income, the shortage and high cost of credit and the rapid growth of population, characteristic of this sector of the economy, help to aggravate the situation.

The third solution is possible only in an economy in the process of development, in which the rate of capital formation is greater than that of population growth, making it possible for the surplus members of the rural family to obtain other types of employment.

Clearly, the effect of the factors of demography attraction makes/itself felt only as the increase in size of the rural family helps to worsen the ratio between the available resources of the farming unit and the number of people living on it.

The demand for agricultural workers in the United States also contributes towards the geographical and occupational displacement of the population. The annual average movement of labourers to the United States was over 100,000 in 1944 and 1945. Of this number, roughly 50 per cent were

/employed

employed in agriculture, and the remainder in industrial work. After the war the number of labourers legally admitted to the United States gradually declined and reached a minimum of 20,700 in 1949. In the period August 1949 to August 1950, emigration again increased and reached a total of 129,000, thus exceeding the average for the war years.

The sharp increase in employment in the United States due to re-armament will undoubtedly encourage emigration to that country. A high level of emigration of this kind can be utilized to relieve the pressure of population on resources in certain areas, and to facilitate the country's economic development generally, but it could also cause serious dislocation if it is carried out precipitately and without a programme adjusted to general development policy.

The magnitude of the changes in the structure of employment can be appreciated by studying the displacement of the population during recent years.

Demographic changes and their effects on economic development

Traditionally, the population of Mexico has been concentrated in the Central Zone of the country, while the population density in the peripheral areas (the coast and the borders) has been very low. The unfavourable environmental conditions in the peripheral areas (the unhealthy climate of the coastal regions, the aridity of the northern frontier area, and their relative inaccessibility) made it difficult to bring their potential resources into productive activity.

The recent development of the economy has changed this situation, accentuating the attraction of the industrial and urban centres (and to an overwhelming degree, of the Federal District) and the drift of the population of central Mexico towards the new agricultural areas developed in the north. In the first half of the ^{XXth} century, the shift of population has been striking and demonstrates the extent of the agricultural and industrial transformation already achieved by the Mexican economy.

According to research carried out by the United Nations Economic Commission for Latin America, the four principal regions of demographic pressure -- the Central Zone (with the exception of the 7 principal cities in the zone), the State of Oaxaca, the States of Yucatan and Campeche, and the Southern Territory of Lower California -- accounted for 61 per cent of the total
/population

population of Mexico in 1900, and by 1950 this figure had dropped to 45 per cent. In contrast, the three principal regions of demographic attraction -- the frontier areas in the north, the seven principal cities of the centre (including Mexico City) and the territory of Quintana Roo -- which together accounted for barely 17 per cent of the total population in 1900 -- rose to 30 per cent in 1950. The absolute figures are equally significant: while the four emigration zones rose from 8.3 millions to 11.6 millions during the half century, the three immigration zones rose from 2.3 millions to 7.8 millions during the same period. The remainder of the national territory doubled its population during this period, rising from 3.0 millions to 6.1 millions, but remained at approximately the same relative level -- 22 per cent in 1900 and 24 per cent in 1950.

This displacement reflects both an absorption of rural population by industry and services and a transfer within agriculture itself, from the regions of traditional economy to the new irrigated regions, for the most part located in the north of the national territory.

The changes in occupational distribution -- which during the fifty-year period are not so spectacular as the geographical shift -- have been greatly accelerated in the last ten years. On the basis of the population increase in the three principal urban centres, and assuming that elsewhere in the country the non-agricultural population has increased at half this rate, and that the ratio of employed to total population has not changed in the last decade, it can be estimated that the population engaged in agriculture now represents only 55 to 60 per cent of the total population (65 per cent in 1940), while the population engaged in secondary and tertiary activities is between 40 and 45 per cent (35 per cent in 1940). In absolute terms, this means that agriculture now employs from 4.2 to 4.5 million people, as against 3.8 millions in 1940, while other activities employ from 3.1 to 3.4 millions, as against two millions ten years ago.

Areas harvested

According to the statistics of the Directorate of Rural Economy, the area harvested rose steadily during the period 1948-1950. This increase was

due to the ploughing up of newly-cleared land, the expansion of the area under irrigation and the greater volume of credit. Figures for the areas harvested are given below:

<u>Years</u>	<u>Hectares</u>	<u>Index</u>
1948	7,131,615	100
1949	7,514,295	105
1950	8,128,829	113

It is estimated that the programme of irrigation works carried out in 1948 increased the cultivable area ^{by} approximately 93,000 hectares of new land, and improved 43,000 hectares. Given the total increase in area, it can be estimated that approximately 300,000 hectares of new seasonal lands were made available for cultivation. The utilization of these lands was made possible by the construction of roads and the availability of loans for financing the clearing of the lands and the current expenses of cultivation.

The lands made available for cultivation in 1949-50 exceeded those made available in the previous year by 400,000 hectares. Of these, 54,000 (13 per cent) have been irrigated by means of wells, chain pumps, and small irrigation works; 102,000 (25 per cent) have been cleared, colonized and prepared for cultivation; 97,000 (24 per cent) have been brought under cultivation by private individuals and irrigated by means of artesian wells. 147,000 (37 per cent) are seasonal lands.

During the same period, 1949 to 1950, the total area under cultivation exceeded 8 million hectares. In the case of irrigated land alone, 90,813 hectares more were brought under cultivation than in the previous year.

Volume of agricultural production

While the area harvested shows a constant upward trend, the volume of agricultural production fluctuates annually due to the influence of factors over which there is no control.

The general index of the volume of agricultural production compiled by the Economic Barometers Section of the Secretariat of the National Economy (See Table No. 1) shows that during the last three years the physical volume of production has risen steadily. This is due, however, to the fact that the increased volume of industrial and fruit crops is sufficiently large to conceal the decrease in food crops which occurred in 1949. While according to the index industrial crops rose 11 points and fruit 3 points from 1948 to 1949, food crops fell 6 points.

Table No. 1

Mexico: Index of Volume of Agricultural Production

Base: 1929 = 100

YEARS	GENERAL	Food crops	Industrial crops	Fruit crops	Forage crops
1929	124.7	127.00	117.4	156.6	92.6
1940	118.5	116.28	123.4	141.5	91.7
1941	141.6	139.21	156.0	147.0	96.3
1942	152.7	155.33	175.4	154.3	95.2
1943	145.7	128.35	188.3	162.8	104.7
1944	157.5	150.81	181.4	167.9	108.6
1945	153.5	147.17	167.1	176.0	112.0
1946	159.2	152.34	177.6	188.3	113.4
1947	168.4	164.15	181.0	192.4	113.1
1948	185.2	183.67	194.7	199.2	119.0
1949 a/	192.8	177.13	205.4	203.3	122.2

a/ Trend by least squares

SOURCE: Secretariat of the National Economy

The volume of production of the following crops increased substantially in 1948 in relation to the previous year: pineapple 4 per cent, rice 18 per cent, wheat 18 per cent, beans 18 per cent, sugar cane 16 per cent, cotton 13 per cent, maize 13 per cent, chickpeas 7 per cent, and henequen 5 per cent.

In 1949 there were increases over the previous year in the volume of the following crops: cotton 83 per cent, rice 13 per cent, coffee 11 per cent, peanuts 9 per cent, sugar cane 5 per cent and linseed 4 per cent. In the same year, there was a decrease of approximately 10 per cent in maize and beans, 4 per cent in sesame, 5 per cent in tobacco and 5 per cent in pineapple.

In 1950 there were increases in the volume of production of cotton, coffee, maize, wheat and beans. (See Table No. 3).

Agricultural prices.

In recent years there has been a general upward trend in the prices of agricultural products. (See Table No. 4) In the case of industrial crops and fruits, the rise has been steadier than in the case of food crops. Industrial crops have followed the fluctuations of prices on the world market, while food crops, as a result largely of the low elasticity of demand for foodstuffs, react to the increases or contractions of domestic production.

/In 1948

In 1948, as a result of the increase in agricultural production, the wholesale prices of the main food crops for domestic consumption levelled off and in some cases fell. In 1949 the prices of the "grains" group fell an average of 5 per cent as compared with 1948; the prices of maize and beans fell 6 and 17 per cent respectively.

The fall in prices in the United States in 1949 partially offset the incentive to an increased volume of exports given by devaluation. According to the report of the Secretariat of the National Economy, the value of dollar sales of the 16 most important agricultural products rose by 31 per cent in relation to 1948, but the rise was due to increased exports of cotton and coffee, the dollar value of which rose by 127 and 58 per cent respectively; the value of sales of the remaining 14 articles declined 31 per cent, while the volume exported was 12 per cent less.

Coffee exports rose from 31,200 tons in 1948 to 49,000 tons in 1949, and in the period January - September 1950 alone the volume exceeded that for the whole of 1948. There was also a substantial increase in cotton exports which rose from 48,000 tons in 1948 to 122,500 tons in 1949 and 170,000 in 1950. In the case of cotton, the rise in prices has fortunately coincided with substantial increases in Mexican production, thus fulfilling the hopes of those farmers who have recently turned to this crop. In the case of coffee, however, total production has tended to decline in spite of the slight increase in the area under cultivation and the rise in prices on the world market.

Table No. 2.

Mexico:

Agricultural Production of the Mexican Republic during
the period 1948 - 1950.

Annual Crops	1948		1949		1950	
	Area cultivated	Production	Area cultivated	Production	Area cultivated	Production
	in hectares	Tons	in hectares	Tons	in hectares	Tons a/
Maize	3,721,770	2,831,937	3,772,994	2,859,928	4,071,800	3,130,000
Beans	788,109	209,629	885,522	231,122	930,000	250,000
Wheat	576,950	477,156	534,868	503,244	690,000	587,300
Cotton	404,678	119,668	548,786	207,690	630,000	234,370
Barley	202,414	149,000	215,000	160,000	230,000	168,000
Sugar cane	173,406	9,558,810	201,278	10,431,567	200,000	9,000,000
Chickpeas	143,866	110,643	133,611	96,995	120,000	84,000
Sesame	139,399	72,850	146,794	89,969	160,000	80,000
Henequen	138,711	122,857	139,753	104,056	141,000	118,000
Coffee	135,541	53,165	144,721	59,027	145,000	60,000

Note: a/ Preliminary estimate.

Source: Directorate of Rural Economy.

/Table No. 3

Table No. 3.

Mexico: Volume of Principal Agricultural Products for Export
1949 - 1950

<u>Products</u>	<u>Thousands of Tons</u>	<u>Thousands of Tons</u>	<u>a/</u>
	<u>1949</u>	<u>1950</u>	
Cotton	122.5	175.4	
Coffee	49.0	45.3	
Henequen	43.8	76.5	
Raw Sugar	94.6	42.0	
Rice	41.2	24.3	
Henequen products	24.0	21.2	
Tomatoes	102.8	88.5	
Refined sugar	43.8	19.5	

a/ Volume for 1950 is estimated

Source: Directorate of Rural Economy.

Table No. 4

Mexico: Index of prices of agricultural production

Base: 1929 = 100

<u>Years</u>	<u>General</u>	<u>Food crops</u>	<u>Industrial crops</u>	<u>Fruit Crops</u>	<u>Forrage crops</u>
1939	128.0	136.4	128.6	105.6	80.9
1940	123.5	131.0	119.2	109.8	94.0
1941	130.7	138.9	126.2	115.3	96.2
1942	151.7	147.6	172.1	146.6	103.1
1943	207.4	209.7	215.7	209.1	147.1
1944	255.5	273.8	237.4	257.1	166.5
1945	285.8	305.3	256.2	328.8	232.6
1946	333.0	347.5	299.5	395.6	254.3
1947	367.6	379.9	350.9	412.3	262.9
1948	353.3	349.5	364.1	428.2	272.4
1949 a/	406.9	409.2	389.7	484.9	307.8
1950					

a/ Least squares

Source: Secretariat of the National Economy.

Diversification of crops

The general index of the volume of agricultural production, compiled by the Economic Barometers Office, shows that production rose to 193 in the year 1949 (base year 1929), mainly as a result of the increase in industrial crops (205) and fruits (203), and to a lesser degree, in food crops (177). The index also shows that the tendency of fruit and industrial crops to rise relative to food crops, has been constant during the last ten years. The relative decline in the production of foodstuffs is the more important in view of the fact that the heaviest increases in the indices of food production occur in the case of export products (tomatoes: 306; rice, 226, chickpeas 179). This indicates that the proportion of resources used for the production of foodstuffs for domestic consumption is declining, in spite of the fact that the areas available for such crops have been extended.

Table No. 5Mexico: Index of the value of Agricultural Production

Base 1929 = 100

<u>Year</u>	<u>General</u>	<u>Food Crops</u>	<u>Industrial Crops</u>	<u>Fruit Crops</u>	<u>Forrage Crops</u>
1939	159.7	173.19	150.9	165.4	74.9
1940	146.4	152.28	147.1	155.4	86.2
1941	185.0	193.35	196.7	169.5	92.7
1942	238.5	229.27	301.9	226.1	98.2
1943	302.3	269.19	406.2	338.9	154.1
1944	402.4	412.92	430.6	431.6	180.9
1945	439.0	446.22	428.1	578.7	266.6
1946	530.3	529.40	531.9	744.9	288.3
1947	694.2	627.40	635.2	793.3	297.5
1948	654.2	641.91	708.9	853.0	329.9
1949 ^{a/}	701.4	701.48	744.0	942.7	361.9

Source: Secretariat of the National Economy

^{a/} Least squares

Table No. 6

Mexico: Value of Mexican Agricultural Production in the Period 1948 - 1950

Annual Crops	1948	1949	1950
	Value of production in pesos	Value of production in pesos	Value of production in pesos a/
1. Maize	858,080,382	1,002,050,000	1,080,000,000
2. Beans	144,193,993	159,115,831	178,750,000
3. Wheat	219,056,209	237,317,895	352,380,000
4. Cotton	387,481,545	824,589,386	1,019,000,000
5. Barley	38,683,681	48,000,000	48,600,000
6. Sugar Cane	254,793,303	289,199,814	252,000,000
7. Chickpeas	48,676,076	48,847,489	43,680,000
8. Sesame	74,048,349	64,401,582	65,600,000
9. Henequen	135,543,729	118,206,319	135,700,000
10. Coffee	114,051,000	152,922,000	210,000,000

Source: Directorate of Rural Economy

a/ Estimates

- - - -

A substantial proportion of the lands where the risks of cultivation are less are used for industrial crops for domestic consumption and for export, and for the production of foodstuffs for export, while the production of foodstuffs for domestic consumption is still dependent on land where the risks are considerable owing to the uncertainties of the climate. The reduction of natural risks by means of irrigation, pest control, mechanization etc. requires considerable investment, but makes it possible to introduce commercial farming. As investments in agriculture increase and the utilization of works carried out by the Government reduce the risks and provide easier access to markets, the sensitivity of farming to prices and demand increases. At the same time it is possible to achieve increases in productivity per man employed, and reductions in the labour force.

Self-sufficiency in foodstuffs has always been an ideal of Mexican agricultural policy. Its desirability is unquestioned, but in practice the country seems to move steadily farther away from it. This problem merits examination in relation to the recent development of the economy and will serve as a basis for discussion of the conditions under which the future expansion of agriculture must be carried out.

/The diversification

The diversification of production is impossible without the introduction of a more advanced technique. The technique which has been used in the case of industrial and export crops is, however, different from that applied to production for domestic consumption. Increases in the production of export and cash crops have for the most part been obtained by the opening up of new irrigated lands, mechanization, the use of fertilizers and, in general, by means of a technique requiring heavy capital investments in limited areas. On the other hand, in order to achieve an increase in the production of foodstuffs for domestic consumption, the principal methods used have been improved varieties of seed and the development of hybrid varieties with high yields and resistance to pests, in other words, "improvements of a biological nature whose effects make themselves felt only indirectly through increased yields."^{1/}

The results of these types of investment on the economy are very different; while the first radically changes the place where it is carried out and its effects are felt throughout the economy as soon as it is applied, the second type of improvement in agriculture is effected in an increase in agricultural yields, and has only long term and indirect repercussions on the rest of the economy.

Defects in planning and execution may, in the first case, have disastrous effects on the economy generally, and even if the policy is successful in the long run, the size of the investments required, in relation to total available resources, may have immediate inflationary effects.

The introduction of commercial agriculture is nevertheless a necessary step in economic development, since at a higher level of economic activity, the general economy's demand for agricultural products is increased and agricultural efficiency and productivity must therefore be higher. Each of the special factors which have led to the development of commercial agriculture are examined below, but in the meantime it is desirable to consider the methods used to increase the production and yields of crops for domestic consumption.

Improvement of seed

The possibility of introducing improvements in this type of agriculture had been considered on many occasions, and leading experts had expressed the opinion that "the whole economic structure of Mexico could be altered for the

^{1/} The expansion of area of seasonal lands by means of clearing, in its initial stages, does not represent a change in technique since it is generally due to the opening up of roads providing access to lands previously uncultivated.

better if some organisation would assist the agricultural improvement of the country". ^{1/}

On the invitation of the Mexican Government, the Rockefeller Foundation began its programme of work in 1943, after signature of an agreement between the Minister of Agriculture of Mexico and the President of the Foundation.

The principal activity of the Foundation was defined as fundamental research into methods and materials of value in increasing the production of Mexico's basic food crops, and as a secondary objective it was agreed to carry out a training programme for selected Mexican scientists, so that in the future the programme could be carried out by Mexico alone.

In 1947, the favourable results of the preliminary work carried out by the Rockefeller Foundation made it possible to set up a new body, the Maize Commission, with the function of promoting practices to ensure the better supply of maize throughout the country. The Government set up a "trust" with the Banco Nacional de Crédito Agrícola y Ganadero S.A. to enable the Bank as trustee to administer 4 million pesos annually for the Maize Commission.

Originally four experimental fields of a total area of 320 hectares were established, and in addition the Commission made use of individual farmers who sowed part of their land with its seed under the supervision of one of its experts.

It is now estimated that the Maize Commission distributes 3,000 tons of improved seed a year, which indicates that approximately 8 per cent of the total maize sowing is receiving the benefit of the work of these bodies.

The Commission's work is carried out with modest resources and its staff consists of 17 technicians and 19 other employees. In 1949 the Commission became an independent agency with an annual budget of 4 million pesos, which was increased to 7 million in 1951.

The Commission's experts have estimated that, generally speaking, the use of improved seed will result in a 20 per cent increase over the yields obtained from native maize.

^{1/} See J. G. Harrar, "El Programa Agrícola Mexicano," Rockefeller Foundation, Mexico, 1950.

Irrigation Policy

The most serious factor limiting agricultural expansion is the shortage of water.^{1/} This obstacle is being overcome by the construction of irrigation works which convert water into a utilizable resource. The main objective of Mexico's irrigation policy has been to utilize water resources in order to increase the area of irrigated land.

In a very complete study of irrigated land in Mexico, Mr. Alanís Patiño describes the relative importance of these lands in Mexican agriculture in the following terms: "In 1940, of every 100 hectares cultivated, approximately 25 were irrigated. In the same year, approximately one-third of the total value of the land was accounted for by irrigated land. By the end of 1950 approximately 42 per cent of the total land under cultivation was irrigated." The tangible results of the works completed are shown in the increase in agricultural production.

The scale of investments in irrigation works is apparent from the fact that recent Governments invested 2,206 million pesos in irrigation works between 1946 and 1950. The financing of these works has for the most part depended on the Federation, with the exception of 147 million pesos obtained by an internal loan (Irrigation Bonds) and 20 millions appropriated by State Governments.^{2/} In 1948-1949 and 1950 the Secretariat of Hydraulic Resources spent 1,052.4 million pesos.

As the irrigation policy began to produce results, and as experience was gained of the technical, economic and social problems which have to be solved in order to ensure proper use and obtain the maximum return from the investments made, the conclusion was reached that the planning and execution of works should not be undertaken in isolation, but should take into account "in a comprehensive and balanced fashion, all the natural resources of a valley, with a view to the material, economic and social improvement of the region". Apart

^{1/} "Irrigation is essential in 52 per cent of our territory; in 41 per cent it is necessary; only in 7 per cent can the farmer work without irrigation, and even then he needs drainage work, ditches and the regulation of streams which we have only recently been able to begin." Marte R. Gomez: "Los Riegos en México", Problemas Agrícolas e Industriales de México, 1950, p. 35, No. 2, Vol. II México.

^{2/} Alanís Patiño, p. cit. p. 57.

from the direct results of the investment in the expansion of the cultivated area, its indirect effects must contribute to the building up of the region. Only in this way can the maximum return be obtained from the investment. Application of this comprehensive development policy has been begun in the valleys of Tepalcatepec and Papaloapan.

The valley of Tepalcatepec comprises a total area of 18,000 square kilometres, for the most part mountainous. Works in the region are directed by the Tepalcatepec Commission, set up in 1947. It is estimated that when the works are completed they will irrigate 71,300 hectares. The population of the valley was 255,000 in 1940.

The Papaloapan Commission was also set up in 1947. The total area of the valley is 45,540 square kilometres. In 1940 the valley had 879,000 inhabitants. It is estimated that an investment of 650 million pesos at 1946 prices will be required to carry out existing plans. The works planned will make possible the irrigation of 208,205 hectares and 250,000 KW will be produced in 4 hydro-electric plants.

The importance of the construction of irrigation works is such that the study cited earlier states in its conclusions: "The national irrigation plan has taken first place in the country's agricultural policy, replacing the agrarian campaign which destroyed the great estates, and which for many years received the preferential attention of the State. Three quarters of the plan have still to be completed, at a future cost which can be estimated at approximately 20,000 million pesos, at 1949 prices."

Mechanisation of Agriculture

The introduction of commercial agriculture must be preceded by the existence of a network of efficient communications, and accompanied in its development by an increasing level of mechanisation.

In the case of Mexico, it is probable that the order of importance of investments in machinery in relation to total investment is as follows: Northern Region, Northern Pacific, Centre, Gulf of Mexico and South Pacific.

/As the

As the shortage of water ceases to operate as a limiting factor, the shortage of agricultural machinery becomes the principal barrier to farm development and investments in machinery take precedence over any other type of investment. When agriculture is consolidated in these new areas, investments are first made in real estate, buildings, granaries and stables and only afterwards (except in specific instances of plantation type agriculture) in land improvements, the planting of orchards etc.

In subsistence farming the process generally begins with the construction of dwellings, and investments in machinery, if any are made, are of only minor importance in the investments characteristic of this type of farming.

The growing demand for agricultural machinery is met mainly by imports, although Mexican industry is already producing machinery and implements for the manufacture of which heavy investment is not required.

There are now 12 agricultural machinery factories in Mexico, and it is estimated that they represent a total investment of approximately 4,557,000 pesos. The gross value of sales of their products in 1949 was 7,099,000 pesos.

Most of the plants are situated in the north, where late in 1948 International Harvester established a plant which produces 65 per cent of the total production of agricultural implements in Mexico.

It is estimated that the following units were produced in 1949:

Mechanical and animal drawn mouldboard ploughs	3,840
Planters for maize and cotton	1,910
Cultivators	11,658
Seed separators, including threshers	2,066
Mechanical and animal drawn spike-tooth harrows	1,800
Mechanical and animal drawn disc harrows	1,550
Haulage carts with metal and tyred wheels	660

In addition, yokes, whippetrees, swing-bars, chains for harness and other easily manufactured articles are produced in smaller unspecified quantities.

According to manufacturers of equipment existing plants are working at only 54 per cent of capacity, which is attributed partly to the competition of imported products.

/Imports

Imports

During the last ten years, imports of agricultural machinery were as follows:

<u>Year</u>	<u>Value of imports of agricultural machinery</u> (in thousands of pesos)		<u>Total</u>
	<u>Imported for the whole country</u> <u>1</u>	<u>Bought in free zones</u> <u>2</u>	
1940	8,641	796	9,437
1941	18,542	1,919	19,461
1942	11,512	539	12,050
1943	11,554	754	18,308
1944	28,891	1,551	29,942
1945	27,324	1,906	29,231
1946	38,876	4,793	43,669
1947	61,536	4,782	66,318
1948	116,233	7,068	123,301
1949	138,602	13,642	152,245

Since 1943 the number of tractors imported has risen considerably under the stimulus of economic development policy. In 1938, 278 tractors were imported while in 1948 the number rose to 6,894, and in 1949, 6,363 excluding those imported in free zones. A similar trend was shown by other types of farm machinery, but was not so pronounced.

Agricultural credit

The redistribution of the land as a result of the Agrarian Reform created two types of agricultural holding, the ejido and the small holding. The economic behaviour of the two types has been studied only superficially, but it is possible to assess some of their advantages and limitations. From the point of view of its operation as a productive enterprise, the ejido has serious limitations, one of the most important being the small size of the ejidal holding, which prevents the maximum utilisation of the ejidatario's labour and hampers the introduction of mechanisation. The financing of ejidal farming consequently raises serious problems and as a result official credit is only partly a loan and must to some extent be regarded as a form of subsidy to subsistence farming. On the other hand, the loans made by private individuals in this type of farming are /in most cases

in most cases usurious, as interest rates of from 10 to 20 per cent a month are common.

The small holding is in a much better position as an enterprise, since its area permits more effective utilisation of the available resources, but it also suffers from a shortage of credit.

Total volume of agricultural credit in Mexico

There is little information regarding the total volume of agricultural credit in Mexico. The estimates which have been made are based on assumptions which give very different and often contradictory results, depending on the person making them. It is generally accepted that the aggregate of crop loans granted during the farm year corresponds to approximately 50 per cent of the total value of the harvest.

It is estimated that the crop loans made during a farm year are derived from the following sources:

<u>Source</u>	<u>Percentage of total annual lending</u>	<u>Rate of interest</u>
Semi-official banks	30%	6% annually
Private banks	15	12% "
Individual lenders	55	10 to 20% monthly

The disproportion between the bank loans at relatively low rates of interest and rural moneylending is an indication of the difficult financing position in which the farmer finds himself and emphasises the need for improved credit conditions as an essential step towards increased farm income.

The available data regarding loans granted show that the volume of credit has steadily increased during the last three years, largely as a result of the expansion of the cultivated area. During the period under review, the volume of agricultural credit was as follows:

<u>Year</u>	<u>Millions of pesos</u>	<u>Index</u>
1948	511.5	100
1949	589.5	115
1950	700.0	156

This estimate covers loans made by the following Banks: Banco Nacional de Credito Agricola, Banco Nacional de Credite Ejidal, Banco de Comercio Exterior and private banks.

Banco Nacional de Credito Ejidal S.A.

It is estimated that this Bank deals with approximately 55 per cent of the country's organised ejidatarios. In 1949, out of a total of 501,188 organised ejidatarios, it dealt with only 272,434. The operations of the Banco Ejidal covered roughly one quarter of all the ejidal lands. In 1949, 168 millions were lent in the form of crop loans and 12 million or 6.7 per cent of the total in the form of improvement loans. In 1949 a total of 202 millions (82 per cent) was lent in the form of crop loans and 28 millions (14 per cent) in the form of improvement loans. The loans granted for clearance and irrigation, to a value of 14 million pesos, made possible an increase of 80,000 hectares in the area of cleared land.

Cotton received the largest volume of loans. A comparison of the loans granted for cotton loans for the production of maize and wheat is given below.

Year	Cotton crop loans	% of total	Crop loans for maize and wheat combined	% of total
1948	\$44,419,720	19.8	75.3	40.4
1949	48,579,988	26.8	79.2	36.4

Details of the types of loans effected by the Banco de Credito Ejidal in 1948 and 1949 are given in the Table in the Appendix.

Table No. 7

Mexico: Operations of the Banco Ejidal by types of loan

1948 - 1949

(in thousands of Pesos)

Type of loan	1948		1949	
	Amount	%	Amount	%
Crop	168,389	90.9	167,351	82.6
Improvement	12,366	6.7	28,613	14.1
Mortgage	31		3,119	1.5
Collateral	2,071	1.1	1,901	0.9
Direct	2,296	1.3	1,845	0.9
Total	185,092	100.0	202,829	100.0

Source: Report of the Banco Nacional de Credito Ejidal. 1948/1949.

Banco Nacional de Credito Agricola y Ganadero, S.A.

The Bank's reports show that in 1948 it lent a total of 115.1 million pesos, 73.6 millions in the form of improvement loans and 41.5 millions in the form of crop loans. In 1949 the total rose to 178 millions, 85.6 being improvement and 61.7 crop loans.

In 1948, approximately 45 per cent of the improvement loans were used to clear land to an area of 55,924 hectares; 30 per cent was used for works and equipment for irrigation which in most cases includes the drilling of wells and the installation of pumping units; 24 per cent was used for the purchase of tractors. In 1949, the proportion for land clearing declined (31 per cent); well drilling absorbed 30 per cent and 24 per cent was used for purchasing tractors.

In the case of crop loans during the years under review, loans to finance the growing of cotton took first place, being respectively 39 per cent and 58 per cent of the total. The financing of wheat and maize took second place, their combined percentages being 35.1 per cent and 25.1 per cent respectively. Thus it can be seen that while loans for cotton production show a constant upward trend, the relative importance of loans for maize and wheat production is tending to diminish. (See Tables 7, 8 and 9).

The report of the Banco Nacional de Credito Agricola y Ganadero for 1948 gives the following explanation of the importance of the loans to

Table No. 8

Mexico: Total Crop Loans granted by the Banco Nacional de Credito
Agricola y Ganadera S.A.

<u>Crops and other investments</u>	<u>Loans granted</u> (in thousands of pesos)		<u>Areas Financed</u>	
	<u>1949</u>	<u>1948</u>	<u>1949</u>	<u>1948</u>
Totals	61,740	41,541	271,247	222,728
Cotton	36,407	16,080	84,097	50,778
Maize	8,126	5,516	80,060	63,395
Wheat	7,666	8,926	58,997	57,406
Beans	1,938	1,123	18,473	10,839
Rice	1,633	1,961	8,286	4,425
Sesame	1,328	1,635	4,458	5,834
Potatoes	867	790	1,510	1,284
Chili	609	388	2,593	1,755
Alfalfa	546	442	1,134	894
Rehabilitation of pasture lands	429	-	2,454	-
Peanuts	344	369	1,002	1,112
Chickpeas	225	78	1,491	466
Fruit trees	215	48	636	153
Barley	128	157	1,601	2,740
Linseed	120	3	717	14
Coffee	118	66	518	320
Oats	105	121	2,072	1,529
Fertilisers	89	127	-	-
Coconut palm	76	87	253	293
Tomatoes	74	43	366	95
Sugar cane	60	82	208	209
Poultry feed	-	55	-	-
Bananas	-	36	-	353
Grapes	25	93	128	602
Strawberries	-	12	-	40
Flowers	-	11	-	7
Sweet Potato	8	-	20	-
Onions	7	13	79	33
Lentils	6	24	62	206
Garlic	5	6	27	28
Cocoa	2	-	5	-
Other (a)	582	-	-	-
(b)	-	3,251	-	17,918

(a) Refers to investments which could not be specified as they covered several items.

(b) Loans granted with formalities and requirements pending at 31 December 1948.

Table No. 9
Mexico: Improvement Loans granted in 1948 and 1949 by the Banco Nacional
de Credito Agrícola y Ganadero

(in thousands of pesos)

<u>Items</u>	<u>Totals</u>	
	<u>1948</u>	<u>1949</u>
Totals	73,663	85,689
Land Clearance	33,424	26,534
Works and equipment for irrigation	15,501	26,061
Other	8,341	1,441
Tractors	9,028	23,187
Other agricultural machinery and implements	2,954	5,584
Plantations	1,278	940
Trucks	688	774
Buildings	562	297
Draught animals	534	286
Poultry breeding	540	93

finance cotton growing: "This Council approved the granting of crop loans with priority for crops considered to be essential for the nutrition of the Mexican people; it also tried to limit the areas under cotton in order to restrict the crop, without prejudice to clients who had been growing cotton for many years; but when a large area eminently suitable for cotton was opened up to cultivation, there was no other course but to grant credits; it is for this reason that cotton continues to occupy first place." ^{1/} In fact, the heavy loans granted for cotton cannot be justified by the size of the loans for clearing cotton land since technically such land is highly suitable for wheat and other products for domestic consumption. The prospective trend of world market prices has taken precedence in economic decisions and the possibilities of developing the national economy are largely dependent on the conditions of world trade.

It can be said that most of the credit granted by private banks was used to finance export crops.

Agriculture which does not receive loans from the official and private banks depends for its financing on usurious loans made by tradesmen in the small rural villages. These usurious loans seriously aggravate the precarious conditions under which this type of agriculture is carried on and prevent capital accumulation, thus contributing to the stagnation of productivity and the lack of technical progress. This type of financing is based on personal acquaintance since the existence of cultural barriers impedes the introduction of credit as a
/commercial

commercial operation and makes possible the exploitation of the peasants in the poorest areas which are still not incorporated into the monetary economy.

Agricultural markets

Little can be said regarding the development of agricultural markets during recent years. Direct and indirect investments in agriculture have helped to develop the market, but as in the case of credit, the advances have been made by export crops and industrial crops for consumption in Mexico. In contrast, market conditions for food crops are still marked by serious defects of an institutional economic character which place the producer in a very disadvantageous position.

The opening up of new communication and transport routes will help to create more favourable conditions for the organisation of the market for agricultural products, as will the building of storage facilities and the establishment of plants for conserving perishable agricultural products.

Foreign trade

During the last three years the export trade in agricultural products has increased. The rise in demand and prices was particularly marked during the last months of 1950, especially in the case of cotton, coffee and henequen. Table No. 10 shows the exports of agricultural products.

In the case of imports, wheat, the consumption of which increases each year, took first place. Imports of tractors, ploughs and tractor spares took second place and accounted for a substantial proportion of total imports.

As long as the United States of America maintains a high level of employment, Mexican producers will be able to take advantage of the high prices of the American market.

Table No. 10

Mexico: Imports

Value in millions of pesos of the principal imported agricultural products and by-products and agricultural equipment

<u>Products</u>	<u>1948</u>	<u>1949</u>	<u>January to October 1950</u>
Wheat	142	173	225
Tractors of all types	56	64	67
Wool of all categories	21	42	30
Rubber, raw or synthetic	32	30	33
Lard	20	23	19
Ploughs of any types	15	21	19
Spares for tractors	13	20	20
Powdered milk	21	16	12
Hops	6	14	9
Barbed wire	22	14	3

SUMMARY AND CONCLUSIONS

The increase in direct and indirect investment in agriculture is the outstanding characteristic of the period 1948-1950. It is to this that the spectacular expansion of the area under cultivation is due and the acceleration of the transition from subsistence to commercial agriculture.

This expansion has been carried out by means of the most varied techniques; the opening up of new seasonal lands, which are worked as soon as the construction of new means of communication makes them accessible; the establishment of agricultural enterprises, with heavy investment per unit of area which make use of a very advanced technique and a high degree of organisation and coordination of the factors of production.

In particular, the following changes and trends may be mentioned:

1. Agricultural income: Agricultural income increased more rapidly than the national income during the last decade, while the relative proportion of the population engaged in agriculture declined. This clearly indicates an increase in the productivity of agriculture.
2. Area harvested: In 1948-1950, the area harvested increased by 13 per cent. This increase was due to the Government's irrigation policy, to the increase in agricultural credit and the expansion of means of communication and transport.
3. Volume of agricultural production: This showed a constant upward trend, notably in the case of cotton and other export crops. The physical volume of food crops for domestic consumption fluctuated from year to year, but tended to rise.
4. Devaluation and production costs: The 1948 devaluation improved the position of exporters who received a net exchange profit of 29 per cent on the selling price. The increase in their costs was easily absorbed, leaving them with a margin of profit. The increases in the production costs of articles for domestic consumption could not be compensated rapidly or were compensated only to a lesser degree.
5. Agriculture for export and for domestic consumption: Commercial farming is mainly directed towards production of raw materials and for export. The production of foodstuffs for domestic consumption is largely dependent on traditional farming, which accentuates the variations from year to year and results in uncertainty regarding the supply of food products.

6. Supply and demand: The high level of investment, and consequently of income, resulted in increases in demand and consumption. There was a slight change in the composition of the food consumption, which undoubtedly reflects shifts from farming to other activities. As long as total investment continues at a high level, and the changes in the composition of agricultural production follow the present trend, increases in production will only partially solve the problem of the domestic supply of certain foodstuffs. The incentive given to agriculture for export and the uncertainty (through natural causes) associated with farming for consumption, will intensify the need for imports.

7. Agricultural prices: Agricultural prices showed a marked general upward trend in the case of certain export crops. In the case of foodstuffs the relative stabilisation of income and the inelasticity of demand prevented their prices from rising at the same rate as the prices of export products and the general price index. When harvests were good, as in 1948, prices fell or remained stable.

8. Improvements in agriculture: The proportion of investments in agriculture for export is very much higher than that of investments in the production of foodstuffs for domestic consumption. While in the former case there have been heavy investments in irrigation works, machinery and loans, the latter has absorbed relatively small resources which have been used mainly for the improvement and distribution of seed.

9. Agricultural credit: The volume of credit offered by the semi-official and private banks has increased by approximately 150 per cent since 1948. In spite of this, about 50 per cent of the credits to agriculture is derived from individual lenders charging exorbitant rates of interest. This hampers the accumulation of capital in farming. In spite of the fact that official policy tends to encourage loans for the production of foodstuffs, the increase in demand and the rise in prices on the world market have changed the flow of credit -- including that of official institutions -- towards the financing of agriculture for export.

APPENDIX II

The monetary situationBackground (1939-45)

The steady expansion of the money supply which began in 1934 continued without interruption until 1945. The expansion was at first moderate and did not exceed an average of 100 million pesos a year. From 1942 onwards, however, the process gathered momentum and the expansion was well in excess of 500 million pesos annually.

Metallic currency which twenty years ago accounted for two-thirds of all the money in circulation gradually declined in importance to less than 2 per cent in 1945. This fact is essentially to be explained by the constant upward trend in the price of silver on the international market which has led to the demonetization of such coinage at various times.

Before 1935 notes were of little significance in the money supply but since 1935 have accounted for more than one-third of the total, partially and to an increasing extent compensating for the decline in the circulation of silver currency.

Another virtually new element has been the expansion of bank deposits in recent years (a fact revealing obvious progress in the development of the habits of the public) to such an extent that in 1945 they accounted for more than half of the total money supply.

During the late world war, the money supply was subject to powerful expansion forces -- the large surpluses in the balance of payments, on the one hand, and, on the other, the adoption by the Government of an extensive programme of public works and industrial development. To these factors was added the expansion of bank credit.

Study of the data relating to Mexico's international transactions from 1939 to 1945 shows that during the period there was a spectacular rise in the monetary reserve of approximately 335 million dollars.

The trade balance was adverse during most of the period, since, although there was a steady increase in the value of exports, a large volume of imports was required to meet the needs of internal economic growths.

/ During this

During this period, in addition to the foreign exchange obtained from the export of commodities, the favourable balance on account of invisibles, consisting principally of tourist expenditure in Mexico and the remittances sent by migrant workers to their families, and the value of gold and silver production were employed to cover the cost of Mexico's imports of merchandise.

To these items was added a substantial amount of capital introduced into the country during the period; owing to its peculiar nature, this flight capital brought little or no advantage to the productive process, since all that it sought in Mexico was greater security and ^{more} favourable fiscal treatment than that afforded in the belligerent or neutral nations from which it was exported.

It would have been possible to ease the pressure on the money supply exerted by the favourable balance of payments; this inflationary factor was, however, strengthened by the lack of an adequate fiscal policy and the determination not to slow down the public works programme.

Table 1 Mexico: Causes of variations in the circulating medium
originated by banks.
(in millions of pesos)

<u>Years</u>	<u>Annual variations in the circulating medium</u>	<u>Causes of variation</u>	
		<u>External origin</u>	<u>Internal origin</u>
1939	149.4	7.3	142.1
1940	179.7	114.5	65.2
1941	204.1	4.2	199.9
1942	541.5	215.7	325.8
1943	867.8	662.5	205.3
1944	629.1	205.6	423.5

Source: Banco de Mexico, S.A.

In fact, between 1939 and 1945, a budget deficit of more than 800 million pesos was accumulated and had to be financed by the issue of Internal Funded Public Debt bonds and Treasury Certificates.

The deficit incurred by the Federal Government can be explained by the fact that ordinary revenue increased relatively slowly, since it was maintained at more or less the same proportion to national income, while expenditure increased more rapidly, especially in the last two years of the period.

The fall in receipts from import duties was not compensated by a corresponding rise in receipts from export taxes, with the result that, while in the early years of the war taxes on external trade accounted for one-third of

total federal revenue they accounted for little more than a quarter in the closing years of the war.

The yield of taxes on industry, which declined in relative terms during the closing years of the war, followed a similar, although less marked, trend, as did the stamp tax; conversely, income tax tripled its relative yield during the same period.

In each of these years, budget expenditure exceeded revenue, as a result of the increasingly large appropriations for the promotions of education, agriculture and communications.

At the same time, State grants and subsidies (1939-1945) and interest and amortization payments on the public debt together required more than one-third of the total budget expenditure.

In addition to these factors, the investments in securities and loans and rediscounts effected by the Bank of Mexico, played an important part in the expansion of the money supply. The Bank invested 330 million pesos under these heads in 1944 and 270 million in 1945.

More than 40 per cent of the Bank of Mexico's investments in 1944-45 were applied to the purchase of bank shares and bonds, mortgage bonds, and shares and other securities from companies and individuals.

In 1944, 95 per cent of the credit granted was represented by short-term paper and rediscounts, and 5 per cent by loans to banks. In 1945, loans to banks accounted for 80 per cent, short-term loans and rediscounts for 17 per cent, and loans to the Federal Government for the remaining 3 per cent.

While the favourable balances on international transactions and the Federal Government deficits were acting together to expand the money supply, the Bank of Mexico decided to use the means at its disposal to prevent the stimulation of the inflationary tendencies of the Mexican economy by an over-expansion of credit. The policy of using reserve requirements as a more effective means of regulating bank credit was therefore adopted.

As a first step, it was decided on 1 August 1940 to raise the reserve requirements to 10 per cent and on 13 May 1941 they were again raised to 15 per cent. Acting under the Act of 31 May 1941, the Bank of Mexico continued to raise reserve requirements until in 1945 it was 50 per cent for deposit banks in the Federal District, 40 per cent for banks in cities where there was a branch of the Bank of Mexico, and 35 per cent for banks in cities where there was no branch of the central bank. The regulations also applied to savings banks, but in their case the maximum compulsory reserve requirements was 10 per cent. Reference will be made below to recent regulations on the subject.

The volume of credits extended by the banks in 1939 and 1940 exceeded the total amount of their obligations, but after the regulations regarding reserve requirements came into force the proportion of credits to obligations began to fall until in 1945 they were a little over two-thirds of total obligations.

The annual rate of turnover of current accounts fell rapidly from 1939 to 1945 and reached its lowest point in the latter year.

Comparison of the figures for the compulsory reserve and for the actual reserve deposited by banks with the Bank of Mexico shows that there was a surplus of reserves increasing to a peak in 1945.

The banking system increased its liquidity; this was largely due to the fact that it was impossible to employ the funds which were being deposited in increasing amounts by the public, since, except for certain types of speculative investment in commercial paper and real estate, operations in other sectors were almost completely suspended as a result of obstacles created by the war. The successive increases in the reserve requirements also helped to freeze a considerable portion of the funds held by banks.

Prices began to rise in an uneven rate as early as 1937, but the greatest increases undoubtedly occurred in the war years, in particular in 1943 and 1944 when the annual rate of increase was between 20 and 22 per cent.

After the depreciation of the peso in 1938, prices began to rise slowly until 1941, after which there was a sharp upswing which reached its peak in 1943-1944. Although prices continued to advance in 1945, the rate of advance was less than in the two preceding years.

The behaviour of prices might be explained by the steady expansion of money incomes coupled with the relative decrease in the supply of goods owing to the combined effect of heavy exports and the restriction of imports. This situation was made more acute by the changes in the distribution of money incomes resulting from inflation, which greatly favoured certain groups of the population.

The workers obtained some improvements in their nominal wages thanks to the combined effect of the progress made by the national economy, higher prices, the protective action of the State and trade-union pressure; nevertheless as a result of the steady rise in the cost of living, which has increased more rapidly than nominal wages all real wages fell sharply, especially in 1942-44.

The present situation (1946-50)

The end of the second World War marked the beginning of a new phase the principal characteristics of which, from the monetary point of view, will be considered below.

In the first stage, covering the years 1946 and 1947, the expansion of the money supply, which had been sustained for over ten years, was interrupted and replaced by a contraction originating in the balance of payments; this movement was, however, largely offset by the internal expansion resulting from a substantial budget deficit.

Demand deposits fell by approximately 200 million pesos, while the volume of notes decreased by only 35 million. On the other hand, the volume of coin in circulation increased by 70 million pesos since new coinage was issued to replace part of the 450 million pesos worth of silver currency the demonetization of which was decreed in 1945.

As the causes of the shortage of imports disappeared, which had been deferred for a long time gathered momentum; the resulting disequilibrium in the balance of trade was so great that in the two year period 1946-47 alone the excess of imports over exports was almost twice as great as the accumulated adverse balance from 1939 to 1945.

The favourable results of gold and silver production and invisibles, principally tourist expenditure and workers' remittances were not sufficient to offset this adverse balance, despite the fact that tourist expenditure and remittances were much higher than in any previous year. The exodus of short-term capital, which began in 1944, continued, although its effect on the money supply was partly neutralized by receipts of other, and particularly long-term, capital.

For the two years, 1946 and 1947, the adverse balance of payments was 250 million dollars.

With the expansion of credit to finance the heavy imports, the private banks began to lose liquidity rapidly, since the Bank of Mexico maintained reserve requirements at a high level, and at the same time adopted a selective credit policy designed to channel credit towards productive activities, in particular agriculture and industry.

Circular No. 1043 of 24 December 1946 authorized deposit and discount banks and savings banks to invest up to 15 per cent of the legal deposits in certificates or promissory notes issued by the Nacional Financiera, Banco Nacional de Comercio Exterior and Banco Nacional de Credito Agricola.

Banks established in the more important stock-raising areas were permitted to invest part of the legal deposits in loans to cattle farmers. In special cases, they were authorized to make investments, subject to the same conditions, in credits agriculture and related industries.

On the other hand, the Bank of Mexico expressly recommended that deposit and discount banks should on no account grant commercial credits for the importation of motor cars, refrigerators, furs, wine and similar articles.

In 1947, there was a remarkable increase in the value of imports to 93 per cent above the 1945 level. In the same period, however, loans granted by private banks rose by only 29 per cent, a fact which is to be explained by the utilization of idle funds accumulated during the war.

In order to prevent the balance of payments deficits from leading to a deflationary situation, the Government accelerated its investments in public works, for which 36.4 per cent of the total net expenditure was appropriated in 1946 and 38.2 per cent in 1947.

Although a surplus of 145 million pesos was obtained in 1946, the next fiscal year closed with an estimated deficit of approximately 191 million pesos, which was met by issuing Internal Public Debt Bonds.

Table 2 Mexico: Causes of variation in the circulating medium originated by banks
(millions of pesos)

Years	Annual variations in the circulating medium	Causes of variation	
		External origin	Internal origin
1945	229.6	447.2	- 217.6
1946	- 78.7	-507.4	428.7
1947	- 22.1	-534.2	512.1
1948	505.1	-104.3	609.4
1949	461.0	423.0	38.0
1950			

Source: Banco de Mexico, S.A.

Prices, the upward movement of which began to slacken in 1945 regained impetus in 1946 and from 1947 on fell very slowly owing to the continuing effect of monetary factors.

In 1948 the expansion of the money supply was resumed although the annual rate of increase did not reach the level of the war years; nevertheless, by September 1950, there were 1,400 million more pesos in circulation than in 1948. Of this amount, 10 per cent consisted of metallic currency while the remainder was divided almost equally between notes and current accounts.

At the disequilibrium in the balance of payments continued in 1948, the money supply might reasonably have been expected to contract but the adoption of energetic measures to correct the disequilibrium, the expansion of credit and the substantial budget deficit of that year wholly neutralised this force and even led to monetary expansion.

Substantial changes in the tariff system, put into effect in 1947, prohibited the importation of goods classed as luxury items and reduced other non-essential imports to a minimum.

The effectiveness of the measures previously adopted was greatly strengthened by the devaluation of the Mexican peso on 22 July 1948, when the Bank of Mexico withdrew from the foreign exchange market.

The restoration of the equilibrium of the balance of payments was achieved less by increased exports than by a marked drop in the value of imports. The reduction from the 1947 level is estimated at 17 per cent in 1948 and 28 per cent in 1949.

Greater advances might perhaps have been made in the value of exports, under the protection of devaluation, if in the first half of 1949 there had not been a fall in the United States prices of items, such as industrial metals and agricultural products, which constitute the bulk of Mexican exports.

As a result of the changes in foreign trade, a favourable balance of payments was obtained in 1949. As in previous years, the most important surplus items in the balance of payments were gold and silver production, tourist expenditure and workers' remittances.

In the second half of 1950, events in Korea brought an improvement in the business situation. Bank reserves rose to war-time levels as the result of a heavy inflow of capital which was exported to Mexico in an attempt to avoid the new regulations necessitated by the existing emergency.

Import prohibitions and restrictions became less rigid in the second half of 1950 because of the strengthened position resulting from the increase in reserves, and shortly afterwards the authorities announced the complete withdrawal of the regulations in view of the fact that the situation which led to their imposition no longer existed.

There was a marked increase in the demand for almost all export products and in their prices on the international market. The rises were most marked in the case of minerals, cotton, coffee and other agricultural and live-stock products.

The volumes of goods exported, which were rising rapidly from January to September 1950, are a further expression of the same phenomenon resulting from the international situation.

The inflationary tendency of the national economy could not have been eliminated merely by correcting the disequilibrium in the balance of payments; it was also essential to adjust the public finances to ensure that there would not be a deficit in most financial years and to control bank credit in order to direct it into non-speculative activities.

It may be said that the Government's tax policy from 1939 to 1946 had insufficient impact on the consumption and investment capacity of the private economy to allow the public works programme to be carried out without resorting to deficit spending.

/In recent

In recent years (1947-1950) government revenue has constituted an increasingly large proportion of the national income in terms of money, having risen from 8.3 per cent in 1939 to 11.2 per cent in 1949. This was made possible by ^{the} efforts made, with very satisfactory results, to improve methods of tax collection and administration. New sources of revenue were established, and an atmosphere conducive to better relations between the State and taxpayers was created.

Among the numerous tax reforms, the most important were the measures establishing the 15 per cent ad valorem tax on exports, the Excess Profits Tax Act, the amendments to the Income Tax Act, the Act respecting tax on the income of automobile assembly plants, and the replacement of the Stamp and Purchase-Sales Tax by the Business Income Tax.

There was a remarkable rise in government revenue when the fiscal reforms described began to take effect; tax receipts increased 6 per cent from 1946 to 1947, 10 per cent from 1947 to 1948, and 38 per cent from 1948 to 1949. It is estimated that the percentage will continue to increase in the 1950 fiscal year.

During these years, foreign trade continued to contribute one-fourth of total Federal revenue; taxes on industry and income accounted for over one-third of the total the remainder being derived from the business tax, profits and other taxes, proceeds and duties.

The Internal Public Debt, which had risen considerably from 1946 to 1948, remained stationary in 1949 and 1950, and, in the case of the domestic floating debt, decreased as amortizations exceeded new borrowings.

Prior to 1949 the Government had not realized its objective of balancing the budget at a level at which it would be unnecessary to reduce its investments in communications, education and the utilization of water resources. In that year, however, a surplus of 133 million pesos was obtained and it is estimated, on the basis of the preliminary figures available, that in 1950 the surplus will be not less than 200 million pesos.

In the last two years, the public finances have ceased to be one of the traditional inflationary forces threatening the Mexican economy and their resources are being used with increasing efficiency to soften the impact of monetary devaluation and to correct the effects of the balance of payments position.

The Bank of Mexico's credit policy has been designed to maintain the quantitative restrictions already imposed on the private banks and the earlier regulations have been supplemented by others intended to channel bank credit towards the development of agricultural and industrial production.

Prior to 30 September 1949, the private banks were subject to the following regulations:

(a) In the case of banks in the Federal District, the compulsory deposit was 50 per cent. Of this amount, up to 10 per cent could be invested in Government securities, Nacional Financiera participation certificates and mortgage bonds of the Banco Nacional Hipotecario bonds; banks were authorized to invest a further 10 per cent in financial bills and other securities, so that the actual compulsory deposit was only 30 per cent.

(b) In the case of banks in places where there was a branch of the Bank of Mexico, the compulsory legal deposit was 45 per cent, but banks had the right to invest up to 7 per cent of this amount in Government securities, Nacional Financiera participation certificates and bonds of the Banco Nacional Hipotecario; in addition, up to 8 per cent could be invested in financial bills or other authorized securities, and up to 10 per cent in agricultural loans. The actual compulsory deposit was thus only 20 per cent.

(c) In the case of banks in places where there was no branch of the Bank of Mexico, the compulsory legal deposit was 40 per cent, up to 5 per cent of which could be invested in Government securities, Nacional Financiera participation certificates and bonds of the Banco Nacional Hipotecario. An additional 5 per cent could be invested in financial bills or other authorized securities, and a further 10 per cent in agricultural loans. As in the preceding case, the actual compulsory deposit was only 20 per cent.

With a view to preventing undue expansion of bank credit following the devaluation of the peso in July 1949, the Bank of Mexico established, that as from 30 September 1949 deposit banks must constitute a reserve of 100 per cent of their deposits and obligations in national currency, in excess of those held on that date. It was further provided that reductions of the legal deposit of up to 70 per cent would be permitted provided equivalent amounts were invested in equipment or crop loans for terms of not less than one or more than two years, in improvements loans or credits for terms of not more than five years, or in securities not maturing for at least two years.

/As a result

As a result of these measures, the investments in securities of the deposit and savings banks increased by more than 54 per cent between 1947 and 1949; investments in financial securities rose most sharply, the volume in 1949 being four and one-half times greater than the 1947 figure.

The total volume of credit granted by deposit and savings institutions also rose from 1,224 million pesos in 1947 to 1,699 million pesos in 1949, i.e. an increase of 29 per cent.

The volume of the investments in securities made by the deposit and savings banks, compared with the total volume of credit granted by them, shows a marked advance, having risen from only 27.6 per cent in 1947 to 30.7 per cent in 1949.

The Bank of Mexico for its part helped to improve the financial position of the private banks by increasing its investment in bank, industrial and private securities; since 1947 it has devoted more than four-fifths of its credits to short-term paper and rediscounts.

The annual velocity of demand deposits which began to increase in velocity in 1946, continued to do so during the following years, reaching the peak for the whole period in 1949-1950, a fact which helped to offset the effects of the restriction of credit.

Examination of the figures for clearing transactions may be of value in bringing out some of the present trends in bank credit.

Between 1946 and 1949 both the number and the value of items presented for clearing increased visibly (by about 28 per cent during the period). The Mexico City clearing house cleared 73 per cent of all items, representing 83 per cent of the total value, the remainder being cleared by clearing houses outside Mexico City.

In 1949, as a result of the Bank of Mexico's regulations concerning deposit requirements, there was an increase in the activity of clearing houses outside Mexico City and the total number and value of the items cleared increased by 24 and 25 per cent, respectively, over the previous year.

The foregoing description of monetary developments between 1946 and 1950 may be summarized as follows:

At the end of the late world war, there was a marked disequilibrium in the balance of payments as a result of the heavy imports effected in 1946, 1947 and 1948.

This fact would certainly have led to a serious contraction of the money supply if it had not been largely offset by extensive government investment in public works.

In 1948 the expansion of the money supply was resumed as a result of the reduction of imports, coupled with the devaluation of the peso in July 1948.

Bank credit, although subject to quantitative control by the Bank of Mexico, nevertheless contributed to monetary expansion through its investments in agriculture, stock-raising and industry.

Table 3 Mexico: Distribution by purpose of credits granted by deposit banks
(Percentages)

<u>Years^{a/}</u>	<u>Total</u> (millions of pesos)	<u>Industry</u>	<u>Agriculture</u>	<u>Stock- raising</u>	<u>Mining</u>	<u>Total Production</u>	<u>Commerce</u>
1944	824	40.77	13.07	3.92	0.75	58.51	41.49
1945	974	37.05	11.74	3.84	0.58	53.21	46.79
1946	1,009	36.69	9.15	3.71	0.47	50.02	49.98
1947	2,081	41.62	5.38	2.00	2.16	51.16	48.84
1948	2,591	41.53	5.84	2.53	1.68	51.58	48.42
1949	3,100	36.45	5.91	2.57	1.53	46.46	53.54
1950 ^{b/}	3,442	36.68	7.16	2.52	0.42	46.78	53.22

Source: Comision Nacional Bancaria: Boletin Estadistico (Figures supplied by the Banco de Mexico)

Note: a/ Balances for December of each year
 b/ June

When a favourable balance of payments was achieved in 1949, the Government set itself the task of countering its inflationary effects by avoiding budget deficits; it was thus possible to absorb some of the money in circulation originating in the increase in the reserve resulting from the improvement in external trade relations.

On the outbreak of hostilities in Korea in June 1950, the economic repercussions of the conflict began to make themselves felt in Mexico.

In the first place, there was a very substantial increase in the demand for products regarded as strategic, accompanied by a rise in their prices on the international market.

While the export trade was being stimulated by these developments, importers, fearing restrictions on the production and sale of certain essential articles, which were already being announced in the United States, hurried to place their orders in good time, in an attempt to cover themselves against any

At the same time, Mexico began to receive large amounts of capital, which were attempting to escape from the new conditions imposed by the international situation in their countries of origin.

Faced by these developments, the Mexican authorities decided to take all possible steps "to prevent fundamental disturbances in the factors of the Mexican economy such as excessive and unwarranted price rises; to check as far as possible or otherwise to deal with shortages in the supply of raw materials for industry or of articles for general consumption, and to eliminate the danger that the present abnormal situation, which may deteriorate, may cause grave loss to the people and to important sectors of the Mexican economy."

An Act approved by Congress in December 1950 empowered the Executive to intervene in industrial or commercial operations concerning articles the production or distribution of which was of great importance to the economy of the country. In addition to fixing maximum prices, the Government may order the freezing of prices, prevent the cornering of commodities, and order the sale of goods at prices not exceeding the authorized ceilings; raw materials and materials held by manufacturers to supply their factories for not more than one year are excepted.

The Government may also institute rationing, establish priorities and specify the use to which commodities should be put. It is authorized to reduce imports or exports if the conditions of the national economy so require, and may decree the temporary taking over of industrial establishments in order to maintain or increase production.

In virtue of this Act, the Federal Executive issued a decree of 2 January 1951 which provides that the prices of a number of articles may not be raised by producers or merchants. The list includes staple foodstuffs, widely used articles of clothing, raw materials essential to Mexican industry, products of basic industries and articles produced by important branches of Mexican industry.

In view of the improvement in the reserve, external trade restrictions were gradually relaxed from the second half of 1950, and in early 1951 all prohibitions and restrictions were withdrawn, the protection of natural industry being ensured by an appropriate tariff system.

Later, in the middle of January 1951, the Secretary of Finance announced an anti-inflationary programme which contains "the following measures designed to diminish the detrimental effects that might arise from the excess of money in circulation":

1. (a) As from Friday, 12 January 1951, any increase in bank deposits must be deposited in full with the Bank of Mexico to ensure its complete sterilisation, thus avoiding further monetary expansion.

2a. To ensure the continuing availability of increasingly ample credit for agricultural and industrial production, the following regulations have been issued:

(a) A bank whose deposits have not reached a sum equal to ten times the amount of its capital, will continue to be governed by the present system until that ratio is reached.

(b) The Bank of Mexico will rediscount for private banks any loan for a term not exceeding one year granted for imports needed by industry or agriculture or any merchant specializing in such imports.

(c) The Nacional Financiera will rediscount for private banks any improvement credits for a term exceeding one year that such banks may make for the importation of machinery or equipment.

3. (a) To facilitate imports required by the Government, the Nacional Financiera will open credits for the account of official departments or decentralized agencies to enable them to obtain immediately any imported goods required by their programmes and provided for in their budgets.

4. (a) The Secretariat of Finance has instructed the Bank of Mexico and the National Banking Commission to require banks to enter into prior consultations regarding any operation of this type to ensure that approval is given only to operations which are not prejudicial to the national economy in the present situation.

Conclusion

Mexico has in recent years acquired valuable experience in dealing with and solving its monetary problems, which are not greatly different from those of the majority of under-developed countries which are seeking to promote their economic development with all possible speed.

The measures adopted to control the inflationary process proved to be effective, especially having regard to the enormous pressure exerted by factors of foreign origin, combined with the almost invariable deficits of the Government budgets.

Successful steps were taken by the Bank of Mexico to regulate bank credit, quantitatively and qualitatively, by means of adjustments in reserve requirements.

The instruments used to deal with emergency situations in the past have shown their value in reducing to reasonable proportions the negative effects normally associated with such developments.

The Mexican monetary authorities took quick and timely action to protect the national economy from the shock produced by the outbreak of hostilities in Korea in June 1950.

At the date of completion of the present report, it is still too early to estimate what effect recent regulations may have on the normalisation of trade or their repercussions in the monetary sector.

III. PUBLIC FINANCE

The influence of public finance on the national income

In Mexico, as in other Latin American countries, Government financial activity has a preponderating influence on economic development and a most important influence on the general situation. The lack of statistics does not permit an accurate quantitative valuation of the aggregate share of the government sector (Federal Government, state governments, municipalities and official decentralized organizations) in the national income, but comparison of the expenditures of the Federal Government, States, Federal District and Municipalities with the national income shows that between 1946 and 1949 they alone represented from 11 to 13 per cent (Table 1). The figure would be higher if a consolidated account including the decentralized agencies was available, although the comparison should be made not with the national income but with the gross national product, figures for which are not yet available.

The influence of public expenditure on national income is possibly more important, however, on national capital formation than on consumption. According to recent estimates, the Federal Government and the Governments of the Federal District, States, Territories and Municipalities allocated between 31 per cent and 38 per cent of their expenditures in 1946-1949 to gross capital formation carried out by the Governments themselves directly or, indirectly, through various credits, investments and contributions to the capital expenditure of other public and private bodies. (Table 1.) According to available estimates this gross investment of public funds during the period represented from 29 per cent to 36 per cent of the country's total gross capital formation, which indicates the degree to which the country's economic development depends on public investment, particularly in view of the fact that a high proportion of the remainder (64 - 71 per cent) is accounted for by residential construction.

Apart from the influence of public spending in itself, the marked fluctuations in the financial position of the Mexican Government in recent years have affected the general monetary situation in various ways. While in 1946 Federal Government operations showed a considerable surplus, there were heavy deficits in 1947 and 1948; other factors which had increased the nominal national income, contributed to bring about the marked disequilibrium in the balance

TABLE 1 - Mexico
PUBLIC EXPENDITURE AND NATIONAL INCOME

	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	
1. TOTAL NET EXPENDITURE	(in millions of pesos)				
OF THE GOVERNMENT SECTOR	<u>2,192.6</u>	<u>2,642.8</u>	<u>3,049.7</u>	<u>3,478.4</u>	p/
Federal Government a/	1,652.9	2,084.6	2,357.5	2,700.0	p/
Federal District	174.2	129.6	a/ 201.2	248.3	
States and Territories a/	283.5	329.4	377.9	400.0	p/
Municipalities	82.0	99.2	113.1	130.1	
2. EXPENDITURE ON PUBLIC WORKS AND DEVELOPMENT	<u>797.5</u>	<u>1,010.1</u>	<u>986.8</u>	<u>1,143.5</u>	p/
Federal Government	692.0	903.5	850.3	1,000.0	p/
Federal District b/	26.1	12.4	30.2	37.0	
States and Territories b/	75.3	89.2	100.6	100.0	
Municipalities b/	4.1	5.0	5.7	6.5	
3. NATIONAL INCOME	(in thousands of millions of pesos)				
c/	19.2	20.9	22.8	25.6	
4. GROSS INVESTMENT					
d/	2.7	2.8	3.3	n.d	
1/3	11.4	(per cent) 12.6	13.4	13.6	
2/1	36.4	38.2	32.4	32.9	
2/4	29.5	36.0	29.9	-	

Notes:

Source: Directorate of Financial Studies, Secretariat of Finance and Public Credit. The figures are taken from a new statistical analysis carried out by this Department and are not comparable with others published hitherto.

p/ Preliminary figures

a/ Excluding amortization of debt; other data under these heads include it.

b/ Provisional estimates

c/ Data from Bank of Mexico, Department of Economic Studies

d/ Data from the Nacional Financiera, Department of Financial Studies

/of payments

of payments in those years, which resulted in the devaluation of the peso. On the other hand, the stabilisation of the peso in 1949, was greatly assisted by the budget surplus achieved in that year, and maintained during 1950. In turn, the improvement in the balance of payments in 1949 and the gradual recovery of industrial and commercial activity after devaluation had a marked influence on the improvement of public finances. In short, beginning in 1949 the financial operations of the Federal Government ceased to augment the deficit in the balance of payments, and from the end of 1949, had a neutralising effect on the creation of income, which greatly facilitated currency regulation and credit operations as a result of which the general situation was stabilised on sound lines.

Financial position of the State

During the years 1946-1949 there was a steady rise in public expenditure as a result of the public works and development programmes of the Federal Government and other public bodies, and of the normal growth of administrative services. The increase in the ordinary revenue of the State was less flexible and was affected from 1946 to 1948 by readjustment in numerous internal activities, the decline in foreign trade and the uncertainty brought about by the exchange crisis which was then imminent. As can be seen from Table 2, in 1946 there was a budget surplus of \$145.0 million, although it was partly due to extraordinary revenue during that year. In 1947 and 1948 there were considerable deficits -- \$190.8^{1/} and \$278.3 millions respectively -- and only in 1949 was it possible to increase tax revenue by means of major reforms, which resulted in a surplus provisionally estimated at \$133.5 million. At the same time the execution of the budget was better defined and controlled. In 1950 it is estimated that there will be another surplus of \$200. or more millions.

The Government's real influence as a purchaser of goods and services has not been diminished by the rise in prices during the period under review, or by the effects of devaluation up to and including 1949. In terms of constant purchasing power, the total public expenditure of the Government sector (including State, Municipal and Federal District organs) increased from 100 in

TABLE 2 - Mexico

^{1/} In this appendix, the symbol \$ has been used to indicate Mexican pesos; United States dollars are indicated by the symbol US \$.

TABLE 2 - Mexico

Federal Government Budget Results

(in millions of pesos)

	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950 e/</u>
1. NET EXPENDITURES					
EFFECTED <u>a/</u>	1,652.9	2,084.6	2,357.5	2,700.0 _{p/}	---
Less: payment pending	57.8	48.9	47.6	33.5	---
2. NET PAID EXPENDITURES <u>a/</u>	1,595.1	2,035.7	2,309.9	2,666.5 _{p/}	3,100.0 _{e/}
3. NET REVENUE	1,740.1	1,844.9	2,031.6	2,800.0 _{p/}	3,300.0 _{e/}
DEFICIT OR SURPLUS IN CASH (3-2)	+ 145.0	- 190.8	- 278.3	+ 133.5 _{p/}	+ 200.0 _{e/}

Source: Directorate of Financial Studies, Secretariat of Finance and Public Credit. The figures are taken from a new statistical analysis and are not comparable with other data published hitherto.

a/ Excludes debt amortisation

p/ Preliminary figures

e/ Provisional estimates

1945 to 122.1 in 1949 (Table 3). Federal Government expenditure rose from 100 in 1945 to 128.3 in 1949 and 133.3 in 1950. Public works and other development expenditure which, as noted earlier, account for more than 30 per cent of total expenditure, have also expanded; i.e. the Government has increased its purchases of goods ^{and services} in real terms (24.4 per cent more in 1949 than in 1945). In order to continue to maintain the real rate of expenditure on construction and development, the Government would have annually to increase expenditures of this kind by a percentage not less than the increase in prices.

The effects of devaluation and of the increase in the public debt can be seen in the item covering interest on the Federal Government public debt, which rose from \$51.8 million in 1946 to \$85.8 million in 1948 and to \$87.2 million in 1949. Even so, this is less than 4 per cent of total expenditure and consequently represents a small burden for the budget.

The total internal public debt rose substantially in 1947 and 1948, as a result of the budget deficits and the specific objective of financing development projects. Bonds were issued for \$438.8 millions in 1947 and \$410.0 millions in 1948. At the same time previous issues of \$86.7 and \$94.0 millions respectively were redeemed, leaving net increases of \$352.1 and \$316 millions. A part of the new issue in 1948 consisted of Industrial Development Bonds to the value of \$75,000,000 -- which had no direct monetary effect, but which served to increase the capital of National Financiera S.A.

Because of the changed budgetary position in 1949, the only bond issues made were to replace bonds redeemed that year, and in fact the redemptions were greater than the issue. An issue of \$151. millions was authorised for 1950; it was used to compensate redemptions, with a slight increase of the debt by \$5.6 millions. According to data supplied by the Banco de Mexico S.A., the floating internal debt was also considerably reduced in 1949 and 1950, in contrast with 1947 and 1948. The net redemption of the internal funded and floating debt amounted to \$59.6 millions in 1949 and \$140.8 in 1950.

TABLE 3 - Mexico

Public Revenue and Expenditure expressed in constant purchasing power
(Indices: 1945 = 100)

<u>Index of wholesale prices</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>
	114.5	121.3	130.1	142.5	157.7

Nominal figures

Total expenditures of the Government sector	109.7	132.2	152.6	174.1	- -
Expenditures of the Federal Government	112.0	141.2	159.7	182.9	210.0
Total expenditure of the Government sector in public works and development	123.7	156.6	153.0	177.3	- -
Total revenue of the Government sector	130.9	141.3	157.8	207.2	- -
Revenue of the Federal Government	137.0	145.2	159.9	220.4	259.8

Deflated figures

Total expenditures of the Government sector	95.8	100.0	117.3	122.1	- -
Expenditures of the Federal Government	97.8	116.4	122.8	128.3	133.7
Total expenditure of the Government sector in public works and development	108.0	129.1	117.6	124.4	- -
Total revenue of the Government sector	114.3	116.5	121.3	145.4	- -
Revenue of the Federal Government	119.6	119.7	122.9	154.7	164.7

Source: Indices of wholesale prices of 210 articles (Bank of Mexico).
The 1949 figures are preliminary; the 1950 figures are based on estimates.

The Mexican Government's direct external debt obligations have been met regularly in recent years in accordance with the 1942 agreement, which fixed the principal at a total of \$230.6 millions. The 1948 devaluation increased its value in pesos to \$320.1 millions, and in 1949, with the inclusion of the railway debt guaranteed by the State and subject to payment in accordance with the 1946 agreement, the total external debt was \$809.3 millions. Prior to 1948 only payments of interest had been effected, but in that year and in 1949 amortisation payments of \$5.0 and \$7.1 millions respectively were made.

Through the Nacional Financiera, the Government has received long and medium term external credits from the Export-Import Bank, the International Bank for Reconstruction and Development and other foreign agencies. The net increase of these debts (sums received less amortisation) was US \$31.2 million in 1946, US \$15.5 million in 1947, US \$8.9 million in 1948, US \$17.3 million in 1949 and US \$12.5 million in 1950. In addition, a new line of credit of 150 million dollars was obtained in 1950. Most of these credits do not pass through the Federal Budget, but are granted to decentralised agencies or private organisations through the Nacional Financiera. They are however contingent obligations of the government.

In 1949 a special operation was carried out which had no monetary effects but which substantially modified the total of the internal debt. The Government took over the unpaid balances maintained in the Bank of Mexico as a result of rediscounting in previous years by official agricultural credit institutions. The Government gave the Bank of Mexico ~~for the development of~~ ^{the} Agricultural Production Bonds to/amount of \$536. millions, and increased by an equivalent amount the capital of the banks concerned. There were other non-monetary debt issues amounting to \$97.9 millions.

Revenue and taxation policy

The net revenue of the Federal Government, state and municipal organs, and the Federal District increased from \$2,267.7 to \$3,590.2 millions between 1946 and 1949; this represents from 11.7 per cent to 14.0 per cent of the national income and the State's tax capacity is therefore still low (Table 4). According to the price indices, its real value varied from 100 in 1945 to 145.4 in 1949 (Table 3). Taking into account only Federal Government revenue, the real increase was from 100 in 1945 to 154.7 in 1949 and 164.7 in 1950, from which it can be deduced that there is an increasing tendency for the Mexican fiscal system to share in rises in prices and the national income. This can be regarded as one of the reasons for the budget surpluses in 1949 and 1950.

TABLE 4 - Mexico

Public Revenue and National Income

	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	
1. TOTAL NET REVENUE OF THE GOVERNMENT SECTOR	(in millions of pesos)				
	<u>2,267.7</u>	<u>2,447.5</u>	<u>2,733.6</u>	<u>3,590.2</u>	p/
Federal Government	1,740.1	1,844.9	2,031.6	2,800.0	p/
Federal District	174.1	179.9	226.8	257.5	
States and Territories	267.8	323.4	360.4	400.0	p/
Municipalities	85.4	99.3	114.8	132.7	
2. NATIONAL INCOME	(in thousands of millions of pesos)				
a/	19.2	20.9	22.8	25.6	
	(per cent)				
3. 1/2	11.8	11.7	12.0	14.0	

Source: Directorate of Financial Studies, Secretariat of Finance and Public Credit. These figures are taken from a new statistical analysis, and are not comparable with other data published hitherto.

p/ Preliminary figures

a/ Data of the Bank of Mexico, Department of Economic Studies

/The Federal

The Federal Government's main sources of taxation have been income taxes, taxes on foreign trade, on metal mining production and other natural resources, on commercial sales, and on industry and transport. The shares contributed by these different sources to total revenue have varied as shown in Table 4. Income tax yielded 7 per cent of the net revenue in 1939 and over 20 per cent in 1946 to 1950. Taxes on foreign trade declined in importance, as did taxes on industry and transport; taxes derived from commercial sales on the other hand accounted for a higher proportion of total fiscal resources.

Federal revenue could also be classed under the heads of direct and indirect taxation, and other sources of revenue. The same trend to increased reliance on taxes on the community's income rather than on taxes on expenditure is shown. (Table 6).

The improvement in the results of the budget in 1949 and 1950 is largely to be attributed to tax reforms and to improved tax administration, as well as to a better understanding between the state and the taxpayer.

The main tax reforms effected during the period 1946-1950 were as follows:

a) Commercial income The Third National Fiscal Convention was convened in 1947 to improve the co-ordination of the federal and local tax systems with the object of increasing the fiscal resources of the Federation and of the States. One of the recommendations was that the Federation should replace the traditional system of stamp taxes and sales taxes by a general sales tax to be known as the tax on commercial income and that the States should discontinue local taxes on trade (generally on fixed bases), and enter into an agreement with the Federation accepting the Federal tax on commercial income, of which they would receive a share. The recommendations were put into effect in 1948, with a tax on gross sales of 1.8 per cent for the Federation and 1.5 per cent for the units of the Federation (later reduced to 1.2 per cent). Sales of essential articles were exempt from the tax, as were first-hand sales and various activities subject to other special taxes. At the same time a mechanised system of tax collection, which was simpler for the taxpayer, was established. The Federal District and three States had accepted co-ordination by the end of 1950, with the consequent improvement of revenue, and one state set up the same system independently with the same results. The yield of the tax on commercial income to the Federation was \$180.1 million in 1948, \$247.9 in 1949 and an estimated \$316.0 million in 1950 (compared with equivalent taxes of \$173.0 millions in 1947). The yield is now approximately 1 per cent of the national income.

TABLE 5 - MexicoPrincipal Sources of Income of the Federal Government

	(In millions of pesos)					
<u>Total net</u> <u>revenue</u>	<u>1939</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>
	<u>574.6</u>	<u>1,740.1</u>	<u>1,844.9</u>	<u>2,031.6</u>	<u>2,800.0</u>	p/ <u>3,300.0</u> e/
Income taxes	41.4	371.4	479.3	451.2	586.0	755.0
Taxes on foreign trade	188.9	320.4	356.2	421.5	803.8	874.0
Taxes on mining and other natural resources	42.0	88.7	137.9	162.8	151.0	320.0
Sales taxes	49.5	284.2	295.0	281.1	292.5	}
Taxes on industry and transport	125.3	200.9	146.3	151.3	256.7	
Other revenue	127.5	474.5	430.2	563.7	710.0	1,351.0

(Percentages)

<u>Total net</u> <u>income</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Income taxes	7.2	21.3	26.0	22.2	20.9	22.9
Taxes on foreign trade	32.9	18.4	19.3	20.7	28.7	26.5
Taxes on mining and other natural resources	7.3	5.1	7.5	8.0	5.4	9.7
Sales taxes	8.6	16.3	16.0	13.8	10.4)
Taxes on industry and transport	21.8	11.6	7.9	7.4	9.2	
Other revenue	22.2	27.3	23.3	27.9	25.4	40.9

Source: Directorate of Financial Studies, Secretariat of Finance and Public Credit. The figures are taken from a new statistical analysis and are not comparable with other data published hitherto.

p/ Preliminary figures

c/ Estimated figures

TABLE 6 - Mexico

Direct and Indirect Taxes of the Federal Government

	<u>1939</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>
	(in millions of pesos)					
<u>Total net revenue</u>	574.6	1,740.1	1,844.9	2,031.6	2,800.0 p/	3,300.0 e/
Direct taxes	49.9	374.2	492.5	469.9		765.0
Indirect taxes	413.1	916.6	968.6	1,072.2		2,002.0
Other revenue	111.6	449.3	383.8	489.5		533.0

(Percentages)

<u>Total net revenue</u>	100.0	100.0	100.0	100.0	100.0	100.0
Direct taxes	8.7	21.5	26.7	23.1		23.2
Indirect taxes	71.9	52.7	52.5	52.8		60.7
Other revenue	19.4	25.8	20.8	24.1		16.1

Source: Directorate of Financial Studies, Secretariat of Finance and Public Credit. The figures are taken from a new statistical analysis and are not comparable with other data published hitherto.

p/ Preliminary figures

e/ Estimated figures

b) Surtax of 15 per cent ad valorem on exports As a result of the devaluation of the peso in 1948, the Federal Government, following the precedent of the 12 per cent tax on appraised value, established after the 1938 devaluation, established an additional 15 per cent tax on exports, intended to absorb 50 per cent of the exchange profit between the previous exchange rate of 4.85 to the dollar and the rate of approximately 6.90 to the dollar prevailing in the free market during the early months of devaluation. The tax is based on the official export values published regularly in the official gazette, partial exemption being granted in cases where costs are shown to have risen. Later, when the rate fell again and was officially stabilised at 8.65 to the dollar, the tax absorbed only 34.1 per cent of the exchange profit. This tax, besides helping to insulate internal from external prices during the period of adjustment to devaluation, and in fact delaying the adjustment, has provided a very important source of revenue which, perhaps more than any other, made it possible to balance the 1949 and 1950 budgets and to meet the increased expenditures resulting from the fall of the peso. The yield of the 15 per cent ad valorem surtax in 1949, the first complete year in which it was applied, was \$367.5 million and in 1950 \$390.0 millions, i.e. 13.6 and 11.8 per cent respectively of the total ordinary revenue of the Federation.

One special feature of the tax is worth noting. It has to some extent taken the place of a tax on income, since an income tax would also theoretically have absorbed the sudden profits occasioned by devaluation although it would have acted more slowly than the surtax, and its coverage would have been less since it would have been limited to purely internal activities.

c) Excess Profits Tax In 1949, the income tax was revised in order to introduce a counterpart of the 15 per cent surcharge on exports -- which had no direct incidence on profits derived from internal industrial, commercial and agricultural operations -- in the form of a tax on excess profits which were deemed to be profits in excess of 15 per cent of the taxpayer's working capital. The tax was levied on a sliding scale ranging from 13 per cent on profits over 15 per cent but under 20 per cent of working capital to 25 per cent on profits exceeding 50 per cent of working capital. Besides encouraging

/companies

companies to re-invest profits the tax has developed into an important source of revenue for the Treasury. In 1949, the first year it was in force, it yielded \$43.7 millions (as against \$695. millions from ordinary income taxes.)

d) Other taxes During the period 1946-1950 no changes were made in the rates or methods of collection of the other taxes of sufficient importance to have any appreciable effect on total federal revenue. In 1949, a new tax was introduced of 10 per cent on the first-hand sales of cars assembled in Mexico, and of 4 per cent on first-hand sales of freight vehicles assembled in Mexico; the tax yielded \$14.7 millions in 1949 and \$20.0 millions in 1950, as a result of the increased output of the assembly plants and the rise in the prices of vehicles. In 1950 postal rates were raised in order to eliminate the loss which was being incurred by the postal service. Mention should also be made of a gradual improvement in the methods of tax collection.

Conclusion

During the last four years, the Mexican Treasury has undoubtedly strengthened its position as an instrument for directing a part of the national income into government works. It may nevertheless be true to say that it has not achieved sufficient taxable capacity to meet the heavy cost of development and public works required for the economic development of the country, while at the same time maintaining and improving the salary levels of public employees, and expanding administrative services. The balanced budgets of 1949 and 1950 achieved partly by tax reforms and partly by more strictly controlled execution of the budget were perhaps the chief internal factor in ending the balance of payments disequilibrium of former years, and preventing the development of new inflationary pressures as a result of the devaluation of the peso. Nevertheless, Mexico's tax system is not yet sufficiently flexible to be used as an instrument of general economic policy or to absorb rapidly any inflationary price increases which might occur. The decided improvement in public finances in the last two years seems, however, to indicate a sound trend which will make it possible to co-ordinate the requirements of economic development and fiscal and budgetary policy.
