

THE ROLE OF THE INDUSTRIAL SECTOR IN THE ECONOMIC
DEVELOPMENT OF THAILAND

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ABSTRACT

The main purpose of this study is to examine the role of industrialization in the economic development of underdeveloped countries with special reference to Thailand.

Thailand's economy and her infrastructure were seriously damaged by the Second World War. Immediately after the end of the War the Government reconstructed the infrastructure and restored foreign trade in order to make the economy run.

As a matter of fact, Thailand is a predominantly agricultural country and agricultural production still can be increased by various possible means. However, the high rate of population growth, which Thailand is facing at present, will pose a problem for the agricultural sector in absorbing the growing labour force and in sustaining the high level of per capita income. Industrialization, with higher productivity, will help to relieve the employment problem and contribute to the higher level of per capita income.

The country may stimulate its industrialization by laying down all the necessary infrastructure, by introducing tax and tariff incentives, by promoting cottage and small-scale industry, and by creating financial institutions to provide the capital.

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THE ROLE OF THE INDUSTRIAL SECTOR IN THE
ECONOMIC DEVELOPMENT OF THAILAND

Introduction.

This thesis is a study of the role of the industrial sector in the economic development of Thailand during the period 1955-1965. The economy of Thailand had its first momentum of development during the early years of this period. There had never been any economic planning before. The first National Economic Development Plan was started in 1961, and covered the period 1961-1966 inclusive. This planning was the responsibility of the National Economic Development Board (NEDEB).

Historically, the foundation of the economy was laid largely upon a natural, laissez-faire system. The enterprise of the population, coupled with a rich and undemanding environment, has stimulated the production of a large rice surplus and other primary goods. Today, however, the important traditional elements of natural growth are losing some of their force. Most of the fertile rice land has been occupied. The accessible teak forests have been cut and regeneration will require decades. Uncontrolled lumbering by farmers and illicit forest operators alike have increased the seriousness of soil erosion and are endangering the

nation's water resources. With the population growth at a fairly high rate of 3 per cent a year, events cannot be allowed their own course as they have been in the past. This has necessitated government assistance to step up the pressure to maintain and to promote the rate of economic expansion and also has necessitated government intervention in the use of natural resources such as forest reserves, water resources and etc.

Purpose of the Study.

The purpose of this study is to discuss the need for industrialization and the role of government in the industrialization of underdeveloped countries with special reference to Thailand.

CHAPTER I

ROLE OF GOVERNMENT IN ECONOMIC DEVELOPMENT

System of Economic Organization.

Prior to a discussion of the role of government in the development process, it is advisable to consider the ideological basis of economic organization, since the role of government in economic development could assume different forms under each system. As Buchanan said:

There may be sharp contrasts in ownership and control and also significant differences in the distribution of income and wealth and in the system of economic incentives for supplying labour and risk-capital.¹

There are three possibilities of opinion of the government according to its approaches to economic development.

1. Centralized planning.
2. Laissez-faire.
3. Developing countries where there is "some" planning and some degree of government intervention.

1. Centralized planning, in some cases it may mean the philosophy of communist doctrine (or totalitarianism)

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Norman S. Buchanan and Howard C. Ellis, Approaches to Economic Development (New York: The Twentieth Century Fund, Inc., 1955), p. 68.

in which the objectives of the whole economy are determined entirely by the command of the government. The main goal of this policy is to maximize the rate of increase in economic development without regard to the desires of the population toward consumer goods. Consumption could be kept within the level desired by rationing, therefore the part of the national income left after the consumption, can be converted to investment in capital goods. The State may own almost all the means of production.

The problems of government appertaining to resources are more in real terms rather than in money terms. Prices and wages are set by the government.² From the characteristics above, a government can have a balanced budget and a stable currency within a closed economy.³ That the high rate of growth in economic development in general and in particular in industrialization can be achieved very rapidly can be observed in Soviet Russia and Communist China since the Second World War. However, the cost of such development is the economic freedom of people--the freedom of consumption choices and the freedom of participation in productive activity according to individual will.

² Stephen Enke, Economics for Development (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1963), p. 536.

³ Ibid.

2. Laissez-Faire Doctrine--i.e. the doctrine of a natural law of life, was first clearly propounded by the eighteenth-century classical economist Adam Smith. This doctrine opposed government intervention, desired free trade and the absence of government controls over private enterprise. An "invisible hand", operating through the market, would manage the economic processes so as to produce optimum results. The Laissez-faire doctrine was also supported by J.B. Say in the well-known "Say's Law", according to which supply creates its own demand. Under this Law, the market was expected to clear out all goods and service (including unemployed labour). The existence of any of these in surplus creates an imbalance and would be attributed to government interference in the market.

Thus, for example, if a government tries to increase the wage rate, costs of production will increase. If the prices of goods are not to be raised accordingly, then the margin of profit will be reduced--probably to a point that will discourage entrepreneurs from taking the risk. If, on the other hand, the prices of those goods are increased they may repel potential purchasers, thereby reducing total sales. In any case, the government's intervention would create unemployment.

Therefore, those who believe in the laissez-faire approach support this argument by two major points.

a) Economic development can best progress only along the lines of free-market competition. This has been the experience, for example, of the United States and England.⁴

b) Resources and manpower will be best allocated; any intervention of the government will tend to distort this optimum allocation and result in diseconomies of production.⁵

However the doctrine of laissez-faire has been declining in its importance and has been criticized by many economists. Keynes was one of many who opposed this doctrine and suggested that the government should have more of a role and more responsibility in economic development through monetary expansion, public investment and other forms of governmental action.⁶

Developing countries where there is "some" planning and some degree of government intervention. The doctrine of laissez-faire has been declining in its support and has been criticized by many economists. First, Keynes was one who opposed this doctrine and he suggested that the

⁴Walter Krause, International Economics (Boston: Houghton Mifflin Company, 1965), p. 494.

⁵Ibid., p. 494.

⁶Dudley Dillard, The Economics of John Maynard Keynes (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963), p. 536.

government should have more of a role and more responsibility in economic development of the country. Keynes also disputed Say's Law; he argued that supply does not necessarily create its own demand. "A single firm cannot create a demand for its own produce merely by making that product. A manufacturer of laxatives cannot count on his workers spending all their wages on his product; it would hardly be to their advantage."⁷ However Keynes accepts that in the long run aggregate supply will be equal to aggregate demand.

Second, the pure theory of laissez-faire or free market enterprise does not exist in real practice. Some degree of government intervention occurred even in the time of laissez-faire. It was the government who paid for the establishment of defense, judicial, monetary institutions and for facilitating capital accumulation. Although, these expenditures did not contribute directly to economic development, they helped to create a better economic climate and the prerequisites for economic development through private enterprise. Besides the above expenditures governments normally spent heavily on infrastructure--public works (irrigation, roads, canals and dams) and public utilities (water supply and power)--in effect, it is

⁷Stephen Enke, Economics for Development (Englewood, N.J.: Prentice-Hall, Inc., 1963), p. 536.

intervening to foster economic development.

Third, the assumption that government intervention would tend to misallocate manpower and resources is not always true. For instance government intervention in diverting the surplus labour from the agricultural sector to the industrial sector by introducing or promoting new industrial development is likely to raise productivity in manpower. However such an assumption may be true, if full employment exists or usually exists.⁸

It is true in practice, at present, that most developing countries fall in the third category in which the government has some planning and some degree of interference in the economic development process. The degree of government share in economic development varies according to individual countries, their policies and prevailing philosophy.

The Role of Government in Economic Development.

As already mentioned, the roles of governments in economic development are different among those three systems. In fact, within the same system the role of governments still differs from country to country, depending

⁸Walter Krause, International Economics (Boston: Houghton Mifflin Company, 1965), p. 495.

on its characteristics, problems and goals.⁹ "Thus, the optimal role of government in the strategy of economic development will not necessarily be the same everywhere, but will depend on the particular social and political conditions of a country and the relevant historical context."¹⁰ Therefore, the discussion of the role of government in economic development in this context will apply in a general sense, not referring specifically to any particular system or country.

Generally speaking, the active role of the government in economic development in the developing countries should be greater than the active role of the government in economic development of the industrialized countries such as the United States and England. This is because developing countries always lack entrepreneurs who have already gained technology, management skills, and capital. Therefore, the aspect of the role of the government has changed from Adam Smith's doctrine of laissez-faire to Keynes' idea of government intervention. Keynes was the

⁹Gerald M. Meier and Robert E. Balwin, Economic Development: Theory, History, Policy (New York: John Wiley & Sons, Inc., 1966), p. 360.

¹⁰E. Mason, Economic Planning in Underdeveloped Areas, Government and Business (New York: Fordham University Press, 1958), pp. 4-5. cited by, Adamantios Pepelasis, Leon Mears and Irma Adelman, Economic Development (New York: Harper & Brothers, Publishers, 1961), p. 129.

first to demonstrate convincingly that government has not only the ability but the responsibility to use its powers to increase production, incomes and employment. Moreover, he argued that government can do this without violating freedom or restraining competition. It can achieve more prosperity by manipulating three main tools: tax policy, credit policy and budget policy. Their use would have the effect of strengthening private spending, investment and production. However, the various roles of government can be listed as follows:

1. Maintaining public services, law and order.
2. Influencing attitudes.
3. Shaping economic institutions.
4. Influencing the use of resources in more productive channels.
5. Influencing the distribution of income to avoid extreme inequalities in income distribution.
6. Maintaining a high level of employment.
7. To supplement private investment in certain basic fields where--whatever the reasons--that activity falls short of meeting the desired level.

To fulfill the above roles the government must engage in these activities:

1. Creation of general conditions favourable to economic development. In developing countries, due to the

lack of sound private investment and shortcomings in the economic development climate, the governments have to participate more actively in creating this favourable climate.¹¹

To create such a condition involves a large number of investment projects, usually of the "basic" type such as investment in the infrastructure and social overhead capital (e.g. investments in transport, power projects, public buildings, urban utilities, construction of schools, hospitals, etc.). Social overhead requires a heavy amount of capital for it is a necessary pre-condition for the process of economic development to start. "Without them, the tree of economic development cannot take deep roots into the soil; the process of economic development cannot become an organic process."¹² This heavy amount of investment falls into a theory of "big push" of P.N. Rosenstein-Rodan, as can be summarized here:

To have any chance of success, launching a country into self-sustaining growth is like getting an airplane off

¹¹The establishment of a favourable economic climate is often referred to as the creation of external economies. External Economies are defined as any favourable effect on one or more persons that emanates from the action of different persons, firms or governments.

¹²V. Bhatt, Employment and Capital Formation in Underdeveloped Economies. (London: Longmans Green and Co. Ltd., 1960), p. 65.

the ground. There is a critical ground speed which must be passed before the craft can become air borne... Proceeding "bit by bit" will not add up in its effects to the sum total of the needed single big push. A minimum quantum of investment is a necessary (though not sufficient) condition of success.

As a matter of fact, in many a developing country the government share in the total investment is more than 60 percent. Investment in infrastructure and social overhead capital by the government, as the so-called "autonomous" investment, is not geared specifically to its market demand or commercial profitability as Singer said:

In practice, underdeveloped countries do not limit themselves to a passive policy of "following the market" in their infrastructure investment, since this creates the danger of a vicious circle: private enterprise may fail to be provided because of a lack of demand for them, in the form of private activities.¹³

But it is quite certain that such an investment can create the external economies whereby private investment is subsequently encouraged to undertake new industrial activities, or induced investment. In other words it helps to create investment opportunities previously lacking.¹⁴ Thus

¹³H.W. Singer, International Development: Growth and Change. (New York: McGraw-Hill Book Company, Inc., 1964), p. 147.

¹⁴U.N., Programming Techniques for Economic Development with special reference to Asia and the Far East, Economic Commission for Asia and the Far East, Bangkok, 1960, p. 17.

there is a tendency to influence private enterprises in increasing their investments and which subsequently will result in increasing national income and attaining a high level of employment.

Besides investment in the infrastructure, government, sometimes, has to supplement private investment in some activities which are inadequate to supply the needs, or some basic industries which are important in their strategy and, or, the capital requirement is so large as to be beyond the ability of private enterprise to undertake.¹⁵

Government investment in social overhead capital such as school buildings, research institutions, training centers, extension services, and so on, is also very important. The human resource is one of the most important resources in developing countries. However, it is not as productive as in more advanced countries. A large part of the labour force is characterized by being unskilled, and lacking in education and industrial experiences. There is a relationship between human resource and the pace of economic development, as human resource is one of the factors of production with other resources in productive activity.¹⁶

¹⁵Singer, op. cit., p. 146.

¹⁶Adamantios Pepelasis and others, Economic Development (New York: Harper Brothers, 1961), p. 46.

Low level of efficiency, "shortage of skills and knowledge results in the limited capacity of their organizational framework to absorb capital in productive investment."¹⁷ Thus it constitutes a bottleneck and retards the pace of economic development. Investment in social overhead capital, therefore, can influence the use of resources-- either the human resources or other productive resources-- more productively, hence weakening the obstacles to economic development.

A government also has to spend on public services, either that which will contribute directly or indirectly to economic development--for example, national defence, law and order, and the duty to supply money. Failure to keep the law and order; failure to avoid monetary chaos will bring an instability of economy and political situation, which will tend to hamper and seriously discourage private investment.

2. Government civil service and organizations. To attain the role, the government civil service at all levels and regions must be in good coordination and cooperation, lend all necessary help to the citizens, eliminate confusion in procedure and 'red tape' as much as possible.

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Hla Myint, The Economics of the Developing Countries (New York: Frederick A. Praeger, 1965), p. 173.

Particularly, more attention should be put on the rural areas where the major population live and engage in production and where the various facilities for economic development are most lacking. In doing so, it is likely to strengthen opportunity for rural peoples to increase their productivity, and increase their income. Thus the increase in their income tends to bring about equality of income between themselves and the urban dwellers. More fairer income distribution will tend to increase effective demand and aggregate consumption, thereby stimulating investment in the industries so favoured.¹⁸ Coupled with the services, institutional building must be fostered. Various services cannot be done so effectively if there is a lack of institutions and equipment. These institutions, for example, are co-operatives, irrigation stations, agricultural extension service, banking, national planning board. Economic development is based on a network of institutions and associations of people of many different kinds. It is an essential job of the government to establish the right kind of institutions or to provide the setting in which the

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W. Brand, The Struggle for a Higher Standard of Living, (Illinois: The Free Press, 1958), p. 228.

right kind of institutions can be encouraged and can flourish.¹⁹

3. Economic planning. The process of economic development involves various complexities. Therefore planning for economic development is important. Most of developing countries are now constructing economic development programs, as their comprehensive plan, under the Central Planning Board. The characteristic features of the task of planning are:²⁰

(a) A plan refers to the future, i.e., it requires looking ahead.

(b) It is based on a number of aims, which have to be specified in order to carry out the planning process.

(c) It requires a coordination of the means of economic policy to be used in order to reach the aims.

It is a wiser idea to make a policy decision by estimating the future developments based on the future needs and changes rather than to make a policy decision based on the past evidence.²¹ Therefore, targets or aims must be set forth. To attain these objectives

¹⁹Singer, op. cit., p. 148.

²⁰Jan Tinbergen, Central Planning (New Haven and London: Yale University Press, 1964), p. 8.

²¹Ibid., p. 42.

simultaneously, coordination among various means--either coordination among various government agencies or among various policies of instruments--are needed in order to avoid conflicts and inconsistencies.

Objectives of Government Policy.

If the goal of economic development is only to increase national income, then the industrialization problem in order to attain that goal is not so difficult. However, the objective of economic development is not only to increase national income, as generally widely accepted, but also to maximize the national productivity and per capita output.²² This complicates the problem of industrialization that is necessary to achieve those goals.

The Government of Thailand is aware of all these problems and is taking steps to solve them. The Industrial Promotion Act of 1954 (revised in 1962) and the first Five-Year National Economic Development Plan are evidence of Thailand's desire for industrialization. The promotion of industrial expansion is one of the principal objectives of the National Economic Plan. The major reliance for the achievement of this objective, however, is placed on private

²²Walter Galenson and Harvey Leibenstein, "Investment Criteria, Productivity, and Economic Development," Quarterly Journal of Economics, 1955, p. 345.

initiative. The role of the government is to be limited to creating a favourable climate for private investment activity, to removing the numerous bottlenecks or shortages, and to creating the infrastructure of the economy. With regard to existing State industrial enterprises, the present policy is confined to the modernization and/or expansion of the existing plants rather than the creation of new ones. This policy in effect means a better use of the existing productive capacity. Government is undertaking or promoting the survey and exploration of national resources valuable to industry; it is endeavouring to provide the public utilities which industry requires, such as an assured supply of cheap power; it is offering certain forms of direct assistance and encouragement, including special assistance for development of cottage and small-scale industries; and it is also planning to expand and consolidate the facilities for scientific and industrial research. This is all for the sake of industrial development which will contribute to the rapid growth of the national economy and per capita income.

However, Thailand has begun planned industrial development only in recent years. The objectives of government policy for industrial development could be

summarized here:²³

(1) To encourage domestic and foreign enterprise to undertake more industrial activities in the country. The State will assist and promote industries of various sizes to suit the needs of the domestic market. The State will not engage in activities competitive with private enterprise and will follow the policy set out in The Promotion of Industrial Investment Act of 1962. There will be no State interference except in quality control.

(2) To assist industrial development by conducting surveys, research, studies, and analysis of national resources, so as to pave the way for the establishment of heavy industries, such as chemical and ore-smelting industries. Studies will also be made of the methods of expanding the capacity of existing industries so that production will be able to meet market demand and will also be technically efficient.

(3) To promote and assist small-scale industries and cottage industries by provision of technical and extension services, and by creating and finding markets for their products. The aim is to build these cottage industries into a base for the future development of medium and large-scale industries.

(4) Increasing the availability of public funds to finance private industrial expansion, and improving the access of firms to these funds.

Each of these policies is important to industrial growth, but what happens with respect to the economic climate in which private industry develops is likely to be the most decisive. What is needed is a further change in the industrial environment, in so far as this can be effected by public policy, to give greater freedom and

²³Government of Thailand, The National Economic Development Plan, 1961-1966, Bangkok, Thailand, pp. 83-84.

greater incentive for the private sector to turn its resources to the most productive uses. Such an environment would also be the one best calculated to attract the capital and technical assistance from abroad which Thai industry needs for its development. The principal action on the part of the government should be to remove the remaining interventions and controls such as government owned industrial factories; import, tariff and labour control as much as possible. So long as these controls continue, they will impede businessmen from making the large-scale adjustments that will be necessary if development is to proceed in the right direction. In the long-run, this approach is the one which is best calculated to provide for the growth of the industrial sector along lines which are efficient and which will serve to increase its competitive strength. In the short-run, however, there may be some situations in which efficiency and growth are incompatible objectives. However, tariffs, import restrictions, and other controls have been essential to protect Thailand's industry from foreign competition. In this manner, in spite of the fact that they are high cost types, enterprises have been enabled to survive and develop.

However, plans should be developed for the removal of all the controls in the future, after the industries have had time to develop and adjust to the impact of

removal of support. Competition will tend to be stimulated by the removal of controls, and hence production efficiency will be improved.

CHAPTER II

ECONOMIC STRUCTURE AND PROBLEMS

Situation at the End of the Second World War.

After the Second World War Thailand's foreign exchange reserves were severely reduced. Therefore, first there was the need to restore foreign trade which had undergone considerable dislocation and strengthen the country's balance of trade position which had deteriorated as a result of the war. Coupled with this was the problem of fulfilling the obligations imposed by the Allies for making available quantities of rice at first free of charge and later at low prices. Third, there was the urgent need to repair the damage inflicted upon power facilities, the Port of Bangkok, the railway system and other means of communication. Overriding all these problems were the inflationary pressures which gathered strength during the War through the heavy Japanese military expenditure in Thailand and which became aggravated by heavy government budget deficits after 1949 especially in 1952 (see table I).

There were two main phases of government strategy in meeting these problems in the immediate post-war years. These involved (1) foreign trade and foreign exchange measures, and (2) measures to control rice exports.

(1) Foreign Trade and Foreign Exchange Measures.

Despite continuous increases in the value of imports, the balance of merchandise trade showed a sizable surplus during the years 1950 and 1951, mainly because of the persistent rise in the quantity of rice exports (see table I).

During this two year period the high prices of rubber and tin¹ also contributed to the surplus in the balance of (merchandise) trade. These surpluses in subsequent years, however, turned into persistent deficits (see table I).

The inflation which resulted from the heavy Japanese and Thai war expenditures was made more serious by the trade boom of 1950/51. The impact of the inflation was followed by a policy induced rise in imports to counter inflation. This took place through currency appreciation towards the end of 1952 and during 1953 exports declined but imports remained at high levels owing to:²

(a) government development projects for which equipment and materials had to be imported; (b) an increase in military supplies and services requirements obtained from abroad; and (c) the continued rise in private import demand.

¹See Appendix A.

²United Nations, Economic Survey of Asia and Far East 1954, Vol. 5, No. 4, (Bangkok: Economic Bulletin for Asia and the Far East, Feb. 1955), p. 180.

Foreign demand for Thai products declined in 1952. The decline in export earnings was due chiefly to the falling price of rubber and tin³ (see appendix A).

The other factor responsible for the decline in exports was the policy of appreciation of the Baht. The currency appreciation was carried out in March 1952⁴ in order to counter the inflationary trend caused by the government deficit and the rising export earnings. The exchange rate for the British Pound Sterling was reduced from 51 to 45 Baht per Pound, an appreciation of 13 1/3 per cent. As a result, imports increased sharply, the large part of which was financed by Sterling which the Bank of Thailand had to supply to the free market to support its new rate. At the same time exports were discouraged.

For the first time in the post-war period, export earnings from rice fell.⁵ This, along with the above

³United Nations, Economic Survey of Asia and Far East 1953, Vol. 4, No. 4, (Bangkok: Economic Bulletin for Asia and the Far East, Feb. 1954), p. 120.

⁴United Nations, Economic Survey of Asia and Far East 1955, Vol. 6, No. 4, (Bangkok: Economic Bulletin for Asia and the Far East, Feb. 1956), p. 183.

⁵The decline in export demand had apparently not been foreseen by the Thai authorities, who decided to appreciate the Baht as export earnings started to decline.-- See United Nations, Economic Survey of Asia and the Far East, (Bangkok: Economic Bulletin for Asia and the Far East, 1953), p. 123.

measures, resulted in a heavy drain on the central foreign exchange reserves. The usual trade surplus was much reduced and turned into a deficit in 1952 (see table I).

TABLE I
TOTAL VALUE OF TRADE AND MAJOR EXPORTS
(MILLIONS OF BAHT)

Year	Merchandise Exports(fob)	Merchandise Imports(cif)	Balance of Merchandise Trade	Major Exports		
				Rice	Rubber	Tin
1950	4,833	4,648	+ 185	2,253	1,347	381
1951	5,976	5,854	+ 122	2,478	1,925	433
1952	4,735	5,678	- 943	2,703	997	355
1953	4,558	6,017	-1,459	2,671	632	341
1954	4,510	6,671	-2,161	1,821	857	349
1955	6,521	7,289	- 768	2,632	1,705	422
1956	7,480	7,562	- 82	3,086	1,859	507
1957	8,142	8,431	- 289	3,957	1,692	531
1958	6,446	8,215	-1,769	2,968	1,326	255
1959	7,560	8,988	-1,428	2,576	2,336	434
1960	8,614	9,562	- 948	2,570	2,579	539
1961	9,997	10,160	- 163	3,598	2,130	617
1962	9,529	11,348	-1,819	3,240	2,111	685
1963	9,676	12,655	-2,979	3,477	1,902	741
1964	12,454	13,867	-1,413	4,461	2,060	961

SOURCE: International Monetary Fund, International Financial Statistic 1965/66 (Washington D. C., 1966), p. 252.

To safeguard the depleted gold and foreign exchange reserves by using them only for payment of "essential" consumption goods, the demand for which had been kept unsatisfied during the war years, the government decided to impose a system of comprehensive exchange control. The entire proceeds of all exports had to be turned over to the

Bank of Thailand at the official rate, and exchange was sold only for approved imports.

However, the comprehensive exchange control was abolished because of difficulty in administration and replaced by a multiple rate in August 1955.⁶ The purpose of this policy was to discourage the imports of unnecessary items, i.e., most luxury goods, which had to be bought with foreign exchange at a higher rate. Under the new system of multiple exchange rates, exporters of main products, namely rice, rubber, tin and teak were required to surrender in some cases the whole proceeds, and in others only a part, of their foreign exchange receipts at the official rate.

The official rate for government imports served as a means of lowering the cost to the government of imported goods. The profits earned from the sales of exchange at higher rates by the Bank of Thailand were used to finance government deficits.

The purchasing power absorbed from the private sector (profits from selling foreign exchange) as a result of exchange operations found its way back into the market through the budget deficits (see table III). Deficit

⁶United Nations, Economic Survey of Asia and Far East 1955, Vol. 6, No. 4, (Bangkok: Economic Bulletin for Asia and the Far East, Feb. 1956), p.183.

spending was in excess of the profit earned by exchange operation, hence the exchange-rate policy could not counteract inflation too effectively.

The government soon realized that to rely on exchange policy to finance this huge government deficit was something which could not continue in view of the conditions prevailing in the world market for Thai exports, since the prices of its major exports--rice, tin, rubber--had become less competitive. Some drastic financial reform was therefore needed. Measures to improve government revenue and to bring about orderly allocation of government resources were clearly essential. The government therefore decided at the end of 1955 to abolish multiple-exchange practices and to unify the exchange rate. The advantages of adopting such a policy can be seen theoretically as: First, the multiple exchange rate system was against the professed belief in the free enterprise system and resented by the population. Second, it reduced foreign investment as foreign exchange controls restricted out-flow of profits earned by foreign companies, or even the remittance of the capital, thereby discouraging foreigners from investing. Third, the strict controls led to profiteering by creating conditions where black market activities would thrive, and thus partly counteracted government policy.

Requirements for surrender to the government of foreign exchange received from export sale were dropped. The government Rice-Monopoly was disbanded (see No.2), and export taxes--on a sliding-scale basis were imposed on rice, rubber and tin exports, to replace the former partial surrender of export proceeds at the official rate. In the case of rice the tax imposed on rice exports to replace the Rice Monopoly profits was called an "export premium." The rate of the premium could be changed according to world market conditions, and used as an instrument for preserving rice supply for domestic consumption at low prices. The advantages of a premium over tax is that the premium can be adjusted faster than the tax and is more sensitive to forces of supply and demand in the country.

The sale of foreign exchange to the government or approved importers at a preferential rate was eliminated. Import licences remained on 23 items, mostly of minor importance.

Since September 1955, all exchange transactions have taken place in the free market with rates that were pegged but which were subject to minor variations due to the market forces of supply and demand. The currency reserves were officially revalued from the rate of Baht 40 to the Pound Sterling to Baht 60. An Exchange Equalization Fund was set up from the surplus which accrued from the revaluation for

the purpose of reducing short-term fluctuations in the exchange rate.

(2) Measures to Control Rice Exports. To fulfil international obligations and to keep the domestic price of rice lower than that prevailing in the world market, the government adopted a monopolistic role. The government undertook to control the volume of exports and to manipulate the supply of rice corresponding to the domestic demand. If the government had left the export of rice free to the market mechanism then the government would not have been able to control the supply of rice and to keep the internal price lower than that prevailing in the world market. Clearly a major aim of the government was to reduce the cost of living in the face of inflationary pressure. Therefore, holding down the price of rice--the major item of food consumption--helped combat inflation, not only directly, but indirectly, by preventing price rises in other commodities. Failure in this regard would have meant a chain-reaction of pressures for higher wages--needed to purchase the staple foods--which in turn would have led to increased costs and prices in other commodities.

Minimum prices for paddy and milled rice at all levels of distribution were fixed and rice was bought from the mills by the Rice Office at a price which was well below the Baht equivalent of the export price. The difference

between the export price, calculated at the official rate of exchange, and the internal buying price, calculated at the official rate of exchange, and the internal buying price, less taxes, resulted in the rice monopoly gaining a fairly large profit, the greater part of which was turned over to the Treasury.

Despite the fact that these measures were deflationary in effect, the money supply after 1952 continued to show an increase (see table II). This was partly due to the heavy world demand for Thailand's exports in 1951, particularly rice and rubber. Another major factor accounting for the rise in the volume of money during this period was the big increase in budget spending of the government (see table III).

TABLE II
MONEY SUPPLY

(Million baht)

Year	Currency	Demand Deposits	Total Money Supply
1952	3,679.3	1,395.4	5,074.7
1953	4,016.9	1,844.6	5,861.5
1954	4,548.3	1,888.3	6,436.6
1955	5,178.7	2,048.3	7,227.0
1956	5,424.1	2,304.3	7,728.4
1957	5,573.0	2,623.6	8,196.6
1958	5,304.0	2,947.9	8,251.9
1959	5,584.6	3,291.5	8,876.1
1960	6,048.9	4,039.5	10,088.4
1961	6,511.7	4,563.7	11,075.4
1962	6,573.4	4,519.9	11,093.3
1963	6,703.5	5,177.5	11,881.0
1964	7,295.6	5,628.1	12,923.7

SOURCE: Bank of Thailand.

TABLE III
GOVERNMENT REVENUE AND EXPENDITURE

(Million baht)

Year	Revenue	Expenditure	Deficit(-)	Surplus(+)
			Million baht	Percentage of Expenditure
1948	1,692	1,662	+30	+1.8
1949	1,927	2,171	-244	-11.2
1950	2,245	2,566	-321	-12.5
1951	3,006	3,359	-353	-10.5
1952	3,422	4,374	-952	-21.8
1953	3,930	5,968	-2,038	-34.1
1954	4,260	5,860	-1,600	-27.3
1955	4,367	5,014	-647	-12.9
1956	5,077	5,749	-672	-11.7
1957	5,168	5,606	-438	-7.8
1958	5,568	6,038	-470	-7.8
1959	6,037	6,667	-630	-9.4
1960	6,778	6,720	+58	+0.9
1961	7,773	7,748	+25	+0.3
1962	8,267	8,472	-205	-2.4
1963	9,026	9,589	-563	-5.9
1964	10,240	10,871	-631	-5.8

SOURCE: International Monetary Fund, International Financial Statistics 1965/66, (Washington, D.C., 1966), p. 252.

Basic Economic Problems.

Having discussed the situation after the Second World War, we now extend our view of the economy of Thailand by considering some of her basic economic problems. These pose a threat to continuation of the 5 per cent per annum growth rate that the economy has experienced over the past ten years.⁷ The main ones noted here are:

- (1) The population problem.
- (2) Problem of maintaining high employment rates.
- (3) Low level of productivity.
- (4) Depletion of natural resources.
- (5) Uncertainty of foreign markets and limited range of major exports.
- (6) Weaknesses in marketing and transportation systems.
- (7) Shortage of skilled manpower.

(1) The population problem. If the current rate of population growth at 3 per cent per annum continues, the present population estimated at 32 million by the end of 1966⁸ will have reached a figure of about 41 million by 1975 (see table IV). Almost half of the population

⁷Government of Thailand, National Economic Development Plan 1961-1966, Bangkok, 1964, p. 1.

⁸See table IV.

TABLE IV
POPULATION GROWTH*

Year	Population	Year	Population	Year	Population
1955	22.8	1962	28.0	1969	34.48
1956	23.5	1963	28.8	1970	35.53
1957	24.2	1964	29.67	1971	36.61
1958	24.9	1965	30.58	1972	37.73
1959	25.6	1966	31.52	1973	38.88
1960	26.4	1967	32.47	1974	40.05
1961	27.2	1968	33.46	1975	41.27

*Mathematical calculation: Predicted Population Growth from 1964, based on population in 1963 (28.8 million) at the rate of growth 3 per cent per year.

$$P_t = P_0 (E)^{rt}$$

Where P_t = Total population at the year t
 P_0 = Total population at 1963--according to official government figures
t = Years, range from 1 to 12 years
r = Rate of population growth
E = 2.71828

Year	t	rt	rt log E	log P_t	P_0 (Total Population)
1963	0	-	-	-	28.80
1964	1	.03	0.0130	1.4724	29.67
1965	2	.06	0.0216	1.4855	30.58
1966	3	.09	0.0391	1.4985	31.52
1967	4	.12	0.0521	1.5115	32.47
1968	5	.15	0.0651	1.5245	33.46
1969	6	.18	0.0782	1.5376	34.48
1970	7	.21	0.0912	1.5506	35.53
1971	8	.24	0.1042	1.5636	36.61
1972	9	.27	0.1173	1.5767	37.73
1973	10	.30	0.1303	1.5897	38.88
1974	11	.33	0.1433	1.6027	40.05
1975	12	.36	0.1563	1.6157	41.27

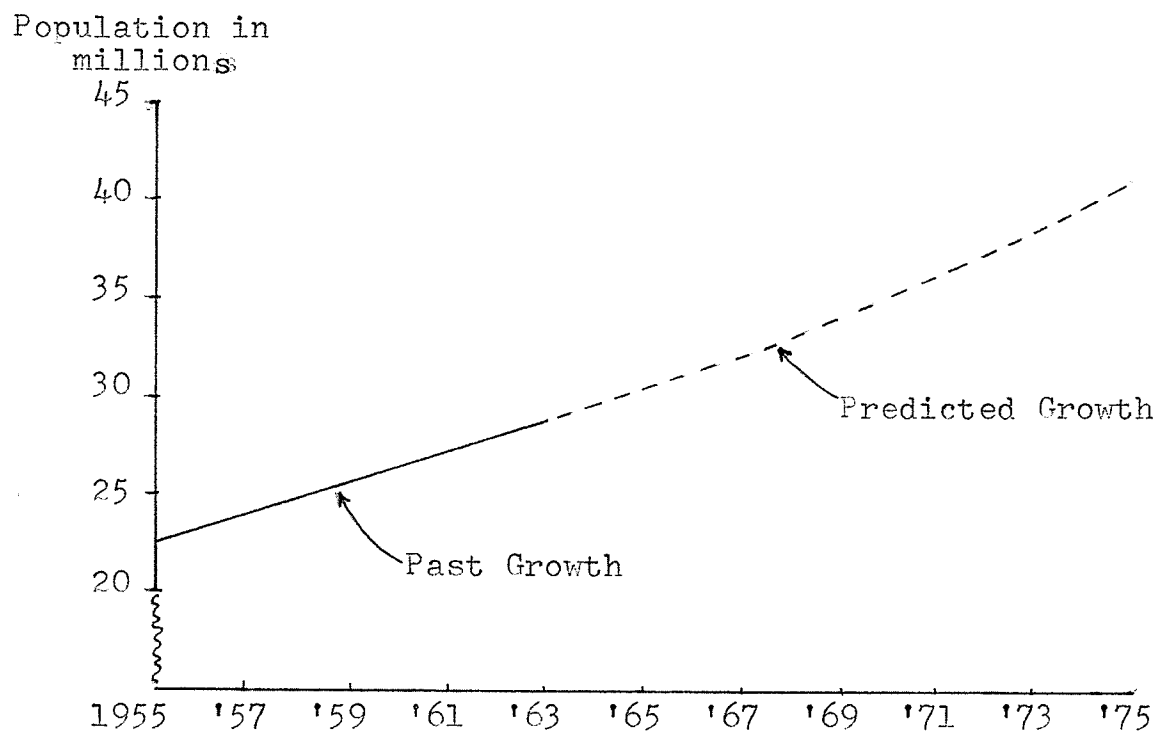


FIGURE 1

POPULATION GROWTH OF THAILAND, 1955-1975
(BASED ON DATA FROM TABLE IV)

(approximately 46 per cent) by then will be below 15 years of age.⁹ This rapid increase in population will naturally aggravate the existing basic problems, making it a more exacting task to raise the standard of living and the level of national income in the years ahead. Jacob Viner has rightly pointed out: "population increase hovers like a menacing cloud over all poor countries. It can offset, and more than offset, the contribution to economic prosperity which all other factors can make."¹⁰

Clearly, the higher the rate of population growth, the higher the rate of growth in national income needed, in order to maintain or raise the standard of living of the people. No improvement in the standard of living is possible when the population increase is higher than the rate of the increase in national income. It follows directly that the rise in the standard of living depends on the rate at which total income increases with respect to population, in other words production must increase more rapidly than population. This can be illustrated by Table V and Table VI.

⁹Government of Thailand, Thailand Facts and Figures 1965, Bangkok, Thailand, p. 103.

¹⁰Jacob Viner, International Trade and Economic Development (Oxford: Clarendon Press, 1953), p. 117.

TABLE V

PER CAPITA INCOME IN 1975 GIVEN VARIOUS EXCESSES
IN THE INCREASE IN TOTAL INCOME OVER THE
INCREASE IN POPULATION. STARTING
WITH AN INCOME OF U.S. \$117*
PER PERSON IN 1963

Percentage Excess	0	1/2	1	1½	2	2½	3	3½	4	4½	5
Resulting income	117	124	132	140	149	158	168	178	189	201	213

SOURCE: See Mathematical Calculation (p. 36).

* Real per capita income in 1963.

The table above indicates the income per person that will prevail in the year 1975 in Thailand if the increase in total income exceeds the increase in population by varying amounts. This table means that, if the growth of total income exceeds the growth of population by 1 per cent, per capita income in 1975 will be U.S. \$132, while if the income growth exceeds population growth by 2 per cent, per capita income in 1975 will be U.S. \$149 compared with U.S. \$117 in 1963.

The effects of various possible combinations of income in 1975 are set forth in Table VI.

TABLE VI

PER CAPITA INCOME IN 1975 UNDER VARIOUS CONDITIONS
STARTING WITH A 1963 INCOME OF
U.S. \$ 117 PER PERSON

Annual Percentage Increase in Population	Annual Percentage Increase in Total Income					
	0	2	3	3½	4	5
0	\$ 117	149	168	178	189	213
1	104	132	149	158	168	189
1½	98	124	140	149	158	178
2	92	117	132	140	142	168
3	82	104	117	124	132	149

SOURCE: See Mathematical Calculation.

Mathematical calculation: To illustrate effects on per capita income by 1975, of various differentials of total income and population growth rates.

$$Y_t = Y_0 E^{rt}$$

Where $Y_0 = \$ 117$ (real per capita income in 1963)

$t = 12$ (from 1963 - 1975)

$E = 2.71828$

$r =$ annual rate of income growth

Then $\log Y_t = rt \log E + \log Y_0$

$$= rt + \log Y_0$$

r(percentage)	rt	$\log Y_t$	Y_t
-3	-.36	4.40218	82
-2	-.24	4.52218	92
-1½	-.18	4.58218	98
-1	-.12	4.64218	104
0	0	4.76218	117
½	0.06	4.82218	124
1	0.12	4.88218	132
1½	0.18	4.94218	140
2	0.24	5.00218	149
2½	0.30	5.06218	158
3	0.36	5.12218	168
3½	0.42	5.18218	178
4	0.48	5.24218	189
4½	0.54	5.30218	201
5	0.60	5.36218	213

From Table VI it shows that if total income increases by 3 per cent without any increase in population growth, it would be possible to achieve per capita income U.S. \$168. If total income increased by 3 per cent, at the same time that population increases at the same rate, then per capita income will remain unchanged at U.S. \$117. The impact of the difference between these two growth rates over even a short twelve-year period clearly shows its importance.

To achieve higher national income and employment at the same time, the increase in the volume of investment will have to be at a corresponding higher rate. Domar said that, if sufficient investment is not forthcoming today, unemployment and low levels of national income will be here today; but, if enough is invested today, still more will be needed tomorrow in order to increase demand so that the expanded capacity can be utilized and excessive capital accumulation avoided tomorrow. Otherwise, the excessive capital accumulation will lead to a fall in investment, and hence a depression the day after tomorrow. The economy must, so to speak, run faster and faster to stay in the same place, otherwise, it will slip downwards.

The above statement indicates that investment is the important key to economic development. In order to attain a certain amount of increase in national income, the volume of net investment required will depend on the incremental

capital-output ratio (ICOR) of that country. Assuming the incremental capital-output ratio (ICOR) in Thailand is 4:1, which means that four units of net investment expenditures yield one unit of output or that four per cent of national income is required to be invested in order to obtain one per cent increase in national income. If Thailand wants to have at least a rate of increase of three per cent per annum in its national income, it will have to undertake investment equal to twelve per cent of national income (assuming an ICOR of 4:1) merely to maintain the given level of per capita income. Since ex post savings and ex post investment are always equal, this would mean that at least twelve per cent of national income must be saved annually (assuming no foreign savings). Generally savings is estimated to be about five to six per cent of national income per year in underdeveloped countries or in a stagnant economy where income per capita remains constant or declines.¹¹ The rate of savings in Thailand is approximately ten per cent of national income.¹²

If reliable information is available, both on the capital-output ratio and on the amount of capital which can

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Charles P. Kindleberger, Economic Development, New York: McGraw-Hill Book Company, Inc., 1958, p. 88.

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A. Thammano, "Public Debt Management and Economic Development in Thailand" (unpublished Ph. D thesis, The University of Oregon, Oregon, 1962). p. 17.

be made available for investment out of domestic savings and foreign aid, foreign loans and foreign investment (if available), it is possible to calculate the rate of growth that the economy should be able to achieve by using the formula.

$$\Delta W/W = \frac{S/Y}{K/Y} - \Delta L/L$$

Where $\Delta W/W$ is the rate of change in per capita income, S/Y is the ratio of savings to national income (local savings plus foreign savings), K/Y is capital output ratio, and $\Delta L/L$ is the rate of change in population.

Assume that K/Y equals 4:1. The amount of domestic savings plus foreign grants and foreign loans makes S/Y equals to 12 Per cent. The rate of population growth ($\Delta L/L$) is 3 per cent.

$$\begin{aligned} \text{Then } \Delta W/W &= \frac{12/100}{4/100} - 3/100 \\ &= 12/4 - 3 \\ &= 0 \end{aligned}$$

There will be no increase in per capita income. However, if population increases at a rate of two per cent, per capita income would rise at a rate of one per cent. This also helps to explain that the lower growth rate of population makes it easier to reach the increase in per capita income, hence improve the standard of living of the people.

The low level of per capita income gives rise to a high marginal propensity to consume and thus low coefficient of marginal savings. There are also numerous impediments to private savings in Thailand other than a low level of national income. These include political instability and underdeveloped financial institutions.

Increased savings by all classes of the population and utilization of these savings for productive investment require the existence of an efficient banking system. This implies that the banks would be so organized as to mobilize a maximum of savings from the public and redistribute them in credits, especially to farmers and small businessmen, who suffer severely from a lack of credit facilities.

The establishment of a wide network of savings banks (using the facilities of the post office, for example), is advisable. Other methods that have been used include the issuing of bonds which will increase in par value and the establishment of a system of saving by deduction from wages, either on a voluntary basis, or, in some cases, through forced savings whereby a fixed percentage of wage is automatically deducted.

The lack of an organized capital market has important repercussions on both the rate and the direction of economic development. It precludes or at any rate reduces

the possibility of mobilizing domestic capital for large-scale private projects.

(2) Problem of maintaining high employment rates.

Unemployment has not yet become a serious problem in Thailand where a vast majority of the population lives in rural areas. Although rural underemployment due to seasonal and other factors may exist, cultivated land may still be made available by means of irrigation, etc., to provide reasonable economic returns in agriculture. A portion, or even a majority, of the population increase may continue to earn a livelihood from farm or rural employment created by the extension of cultivated land and more intensive cultivation. However, if the current rate of population growth remains unchecked, unemployment could become a more serious problem in the near future, because traditional ways of providing employment opportunities will not be adequate. New employment opportunities will have to be created on the land, in industry and in tertiary occupations, involving increasingly heavy and costly investment as the easier and cheaper means of creating employment become exhausted. This means that the economy will have to be diversified along secondary and tertiary lines and the proportion of the labour force in occupations other

than agriculture will have to rise.¹³

Data in Table VII will serve as evidence of the changing characteristics of the Thai economy. The figures indicate the shift in the composition of Thailand's labour force out of agriculture into non-agricultural activities, particularly manufacturing, construction, provision of public utilities, transport and communication.

(3) Low level of productivity. Production of goods and services in Thailand is generally characterized by a low level of productivity. Yields of almost all major crops (rice, rubber, sugar-cane, jute) are low. Many manufacturing industries are being protected in the face of a complex of problems and difficulties. Transport services are not efficient with respect to convenience and unit cost. Measures, such as modern techniques of production, general education and training, special training to upgrade managerial efficiency and so forth, for improving productivity and management will have to be taken.

(4) Depletion of natural resources. The growth of population has brought about an unfavourable change in the balance between population and natural resources. This has been accentuated by the pace at which natural resources

¹³ See Composition of Economically Active Population by Major Industrial Group, Table VII.

TABLE VII
 COMPOSITION OF ECONOMICALLY ACTIVE POPULATION
 BY MAJOR INDUSTRIAL GROUP

(Percentage)

Item	Industrial Group	1947	1956	1960	1961
1	Agriculture, Forestry, Hunting and Fishing	84.78	87.95	82.4	81.58
2	Mining and Quarrying	0.50	0.19	0.2	0.22
3	Manufacturing	2.18	2.08	3.4	3.59
4	Construction, Repair and Demolition	0.09	0.28	0.5	0.54
5	Electricity, Water and Sanitary Services	0.03	0.05	0.1	0.12
6	Commerce	7.86	4.54	5.7	5.87
7	Transport, Storage and Communication	0.73	0.83	1.2	1.29
8	Services	3.04	3.85	4.7	5.08
9	Workers not classifiable by Industry	1.24	0.23	1.8	1.74
Total		(100%)	(100%)	(100%)	(100%)

SOURCE: Population Census 1961

have been exploited. Valuable forest and mineral resources are being rapidly exhausted and the old balance can never be restored now by conservation or fresh discoveries. For example, a recent forest survey discloses that forest resources are less than previously estimated. Unit cost of lumber production is going up and the volume of teak ready for cutting is going down. The best tin deposits are nearly exhausted and the stage has not yet been reached when other newly discovered mineral deposits, apart from non-metallic minerals such as gypsum and lignite, can be worked on a commercial scale.

The depletion of natural resources underlines the need for measures of conservation and for extensive prospecting with a view to uncovering fresh mineral deposits. Particularly urgent is the need to preserve watershed areas and soil fertility through forest conservation and other land management measures.

(5) Uncertainty of foreign markets and limited range of major exports. Apart from the important problems mentioned above, there are other pertinent problems, one of which is the uncertainty of foreign markets for major exports. There are only three major exports (rice, rubber and tin), therefore, if any of their prices are unfavourable in the world market it will have great repercussions

on national income, production and level of employment in the country.

(6) Weaknesses in marketing and transportation systems. The imperfection of the marketing and transportation systems is another problem. Marketing efficiency is undermined by lack of information re supply and demand situation, price trends, optimum timing of sales, and so forth. The limited system of secondary roads and railway branch lines is inadequate to serve smaller settlements and outlying areas.

(7) Shortage of skilled manpower. Lack of skilled manpower makes it difficult to introduce highly sophisticated production techniques. Since the expansion of production in any sector usually requires the use of new skills and techniques (machine operation and maintenance, administrative skills, and so forth) the lack of trained manpower constitutes a bottleneck to the rate of production growth. Moreover, the unskilled labour tends to raise production costs. These problems have themselves contributed to a low level of production of goods and services, high production costs and undue wastage. In the face of rapid population increase, they would, if unresolved, seriously retard economic growth.

Definition and Characteristics of Underdeveloped Countries.

The term "underdeveloped countries" should be used only to describe or classify countries which are distinctly less well-off than the developed countries such as the United States. The report on "Measures for the Economic Development of Underdeveloped Countries" by the group of UN experts says:

We have had some difficulty in interpreting the term underdeveloped countries. We use it to mean countries in which per capita real income is low when compared with the per capita real incomes of the United States of America, Canada, Australia, and Western Europe. In this sense, an adequate synonym would be "poor countries."¹⁴

Underdeveloped countries are very numerous and embrace a great proportion of the world population. Since these countries are many and have different physical, social and political backgrounds, they are bound to have different characteristics. Although it is not possible to give an example of a perfectly representative underdeveloped country, it is nevertheless, possible to cite some more or less typical characteristics common to many underdeveloped countries. Six characteristics are given

¹⁴Benjamin Higgins, Economic Development: Principles, Problems and Policies (New York: W.W. Norton & Company, Inc.), 1959, p. 6.

here and others are either expansions, deductions or inferences from these:¹⁵

1. Low per capita incomes. Higgins defines these arbitrarily as less than U.S. \$500 annually. He uses this figure to distinguish developed from underdeveloped countries.

2. Relatively low use of modern technology.

3. High rate of population growth.

4. Low percentage of literacy.

5. Inefficient money system.

6. Inadequate transportation and communication.

Since people have low per capita income, therefore, they have a low level of savings and general lack of capital per head. With all these factors combining with lack of technology, the underdeveloped countries find primary production the most promising occupation. Primary production such as agriculture, forestry, fishing and mining employs a very high percentage of the labour force and contributes a great deal to the gross national product. The dominance of primary production can be explained by the relative factor supply which tends to favour specialization in labour-intensive or land-intensive projects in those countries where the population is high or where the land

¹⁵Ibid., p. 11.

is abundant respectively. There are a few industries especially for processing the agricultural products and manufacturing agricultural implements including rice mills, saw mills and textile mills.

Definition of Economic Development.

Economic development is a matter that has only quite recently begun to receive systematic consideration and on which relatively little agreement as yet exists. However, Schumpeter defines economic development as:

a process of economic change which is not forced upon the economic system from without but which arises by the initiative of the system itself and is characterized by the introduction of innovations, giving rise to increases in real per capita income.¹⁶

The processes of economic change are of two types: (a) historical change and, (b) dynamic change. The former refers to the introduction of new innovations, the latter means the spreading out of innovations over the whole system.

Schumpeter defines innovation very broadly. It might be regarded either as technological progress or resource discovery (or both). He thought of innovation in general as any change in the production function which would bring

¹⁶J. A. Schumpeter, The Theory of Economic Development, (New York: Oxford University Press, 1961), p. 63.

an increase in output. Any doing of things differently,-- which increases the productivity of the bundle of factors of production available (including resources given in the economy but not yet discovered) is an innovation. He listed five major forms of innovation:

This concept covers the following five cases: (1) the introduction of a new good--that is one with which consumers are not yet familiar--or of a new quality of a good. (2) The introduction of a new method of production, that is one not yet tested by experience in the branch of manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially. (3) The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before. (4) The conquest of a new source of supply of raw materials or half-manufactured goods, again irrespective of whether this source already exists or whether it has first to be created, (5) The carrying out of the new organization of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position.¹⁷

The process of economic development, therefore, could best be analysed by centering our attention on the activity of carrying out innovations. Innovations do not just occur automatically. It is the creative response of an entrepreneur to his environment (which includes both natural resources and the opportunities of a given moment

¹⁷Ibid., p. 66.

of time).¹⁸ Entrepreneurs play the most important role in economic development according to Schumpeter. Entrepreneurs may be either single persons or social groups such as the State.

It is important that there exist a sufficiently large number of entrepreneurs who are conditioned by the social environment and more particularly by the economic environment. Entrepreneurial ability, to have full play, presupposes a favourable social, political and economic climate--a climate such as to make the prospective entrepreneurs feel certain about the objective feasibility of their innovations. Where such a climate does not exist, potential entrepreneurs are not able to perform their function; their purposes are thwarted by the environment. The creation of this favourable climate is a function which the State can perform.

A favourable economic climate is indispensable for setting into motion the process of economic development. Creation of such a climate requires suitable reshaping of the environment and the actual needs of a given situation.

For the sake of simplicity, economic development means providing for increasing production as time passes,

¹⁸ Richard V. Clemence, The Schumpeter System, (Cambridge, Mass: Addison-Wesley Press, Inc.), 1950, pp. 36-38.

predominantly through improvement in technology, finally resulting in an increase in real per capita income. Hence the problem of development is the problem of trying to get more in the future.

Therefore, the objective of economic development of a nation is to aim at achieving a higher standard of living of the people. This objective can be further specified as follows:¹⁹

1. An increase in per capita income.
2. A high level of employment.
3. A relatively stable price level.
4. Equilibrium in the balance of payments.
5. A reduction of inequalities in income distribution.
6. The avoidance of marked disparity in the prosperity and growth of different regions within a country.

¹⁹United Nations, Programming Techniques for Economic Development, with Special Reference to Asia and the Far East, Bangkok, Thailand, 1960, p. 7.

CHAPTER III

INDUSTRIAL DEVELOPMENT

The purpose of this chapter is to study the role of industry in economic development. In order to illustrate that industrialization is becoming more important for underdeveloped countries the case for industrial development, the concept of balanced growth, and the theory of economic development with unlimited supplies of labour will be discussed.

Although, this chapter attempts to show that industrial development is necessary and can not be overlooked, we must not make the mistake of regarding industry as more important than agriculture for most of the underdeveloped countries are characterized by the rural nature of their economy. Underdeveloped countries should not give first priority to industrial development, on the other hand agricultural development should be given the first priority. The economic rationale behind this priority is that industry needs a richer market for its products, therefore, development of the agricultural sector will create that richer market (more details will be discussed in the case for industrial development and the concept of balanced growth).

Having mentioned the priority of economic development in underdeveloped countries, we then can proceed to

study the case for industrial development.

The population of Thailand has expanded rapidly,¹ especially in the agricultural areas. Such continued increase will eventually place a strain on the existing employment opportunities in the agricultural areas. Thus Singer said:

Dense population does indeed cause great poverty. Since underdeveloped countries are predominantly primary producers, dense populations on limited areas of land create a Malthusian deterioration through the law of diminishing returns.²

Consequently other economic sectors have a responsibility to provide employment for the growing population of working age. Thus employment requirements have been another reason why industrialization is an unavoidable need from the view of Thailand's economic development. Furthermore, because industrialization can help to stabilize income, it is regarded in underdeveloped countries as a remedy for economic problems such as low income level, low employment and low output. Whether it acts as a supplement to, or a partial replacement of, the production of raw materials, industrialization contributes to stability

¹Refer to Table IV.

²Hans W. Singer, "Problems of Industrialization of Underdeveloped Countries," International Social Science Bulletin, A Quarterly Bulletin Published by UNESCO, Vol. 6, No. 2, 1954, p. 221.

because it involves a broadening of the country's economic base. Although to diversify raw material production will contribute to income stability, far greater stability will be achieved by industrial development because it carries diversification further, extending it into the area of secondary production. Income stability becomes greater with extension of diversification into the area of secondary production because it facilitates the variance of the volume of output by producers in response to changes in demand.

Industrial development not only stabilizes income; it also helps to generate it. The reasons being:

1. With industrialization, more raw materials will be demanded, which eventually will lead to a general increase in the per capita income of the people in a region.

2. Production can sometimes be hampered by the lack of market mechanisms in the underdeveloped countries. Industrialization may help to provide efficient market mechanisms.

An additional, and often basically sound, argument for industrialization is that it may improve the stability of foreign exchange earning through diversification of exports by the introduction of manufactured goods into the normal export flows.³

³United Nations, Measures for the Economic Development in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1951), p. 9.

Further, industrialization which allows the economic production for domestic use of goods which would otherwise be imported has as good a stabilizing effect; for this kind of local manufacturing reduces demands on the country's foreign exchange.

In order to support further the case for industrialization we will discuss the concepts of "balanced growth" and "development with an unlimited supply of labour."

The Case for Industrial Development and the Concept of Balanced Growth.

Many economists have accepted the proposition that economic growth is a good thing and there is little doubt about the fact that it is desired. Moreover, all seem to assume that any geographic area, whatever its size or resource and population endowment, is capable of economic development. The fundamental problem in Thailand is similar to all underdeveloped countries, namely, that productivity is so low that the real national income of the inhabitants on a per capita basis is less than one-quarter that of the United States. Also, it seems to be agreed that the problem of low productivity can be rectified by some amount of capital accumulation in each geographic area. However, the economy is locked in a "vicious circle" in which the capital is neither supplied nor demanded, for as Nurkse has said:

On the supply side, there is a small capacity to save resulting from the low level of real income. The low real income is a reflection of the low productivity, which in its turn is due largely to the lack of capital. The lack of capital is due largely to the small capacity to save. On the demand side, the inducement to investment may be low because of the low purchasing power of the people, which is due to their small real income, which again is due to low productivity. The low level of productivity is in itself due to the low level of capital employed in the production process. Then the vicious circles are complete.⁴

The problem we face is that of breaking out of this vicious circle and establishing sustained growth. Many economists including the United Nations Economic Commission For Asia and Far East support the doctrine of the "Balanced Growth" theory, which they believe provides the best solution for this dilemma of achieving sustained growth in the underdeveloped countries, as illustrated by their report:

Some degree of balance among the growth of the different sectors must be maintained; if any of them neglected, it may become a bottleneck to further growth, as several countries in the region have found when they have put too great stress on either industry, agriculture or overhead facilities to the detriment of the others.⁵

⁴Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries (New York: Oxford University Press, 1953), p. 5.

⁵United Nations, Formulating Industrial Development Programs, with special reference to Asia and the Far East, (Bangkok: Economic Commission for Asia and the Far East, 1961), p. 2.

The term "balanced growth" can be found in three different contexts. These contexts may be distinguished as the nontechnical context, the general technical context, and the specific technical context.⁶

1. In a nontechnical context the term is employed to describe such concepts as broadly based growth; growth which diffuses its benefits widely among various classes; and growth which entails very little disruption of the social process.

2. In a general technical context, the term balanced growth is often used to describe the balance between ambitions, and the resources which are available to fulfil them; or in a stricter sense, the balance between intended savings and intended investment. If an investment employs the resources available in such a way that inflation does not occur, it is said to be balanced. (At times, however, inflation may act as a stimulus to economic activity, and would then be desirable.)

3. In the context designated as a specific technical context, the term balanced growth refers to yet another type of balance...that achieved between market size, and the supply of capital. This concern with market-supply

⁶H.W. Singer, International Development: Growth and Change (New York: McGraw-Hill Book Company, 1964), pp. 39-40.

balance is often a question of balance between different sectors of the economy, for example, agriculture and industry. Another discussion which arises regarding market-supply balance takes the form of an examination of the need to create improvements which result in the more efficient production methods which in turn create new markets.

These improvements can be achieved by the simultaneous expansion of that economic infrastructure which is comprised by health, transport, housing, education etc., as well as by a more direct expansion... that of supplies of final goods. These improvements may also be achieved by broadly based investment in production efficiency. In this case, the infrastructure, external economies, and the total supply of final goods exhibit simultaneous development, so that increases in real income provide the necessary market for the increased flow of final goods.

It is only with the specific technical sense of the term balanced growth that we are concerned in this treatment of the subject. Let us, then, turn to a detailed examination of the doctrine of balanced growth in the specific-technical context.

Rosenstein-Rodan was the first person who developed this theory. In 1943 he published his ideas concerning the

problem of European reconstruction after the war.⁷ He made two basic assumptions: first, that a substantial excess agrarian population existed and secondly, that the optimum size of any enterprise required a sufficiently large market area. He considered that there are two possible paths of industrialization in Europe; first, a vertical integration of all eastern and south-eastern European industry which does not require substantial capital assistance from outside and secondly by taking the whole area as one geographic unit assisted by outside capital with the aim of developing a package of self-supporting industry. The first was discarded as being too slow and unreliable without substantial outside capital assistance. In contrast, the latter appears more advantageous in the sense that it would result from industry's fundamental "complementarity" which meant that the demand for the output of the individual firm would be provided by the incomes and material requirements generated in all the other firms in the unit.

The example cited by Rosenstein-Rodan is that of the establishment of a shoe factory. This factory was

⁷Rosenstein-Rodan, "Problems of Industrialization of Eastern & South-Eastern Europe," The Economics of Underdevelopment, ed. Agarwala and Sing, (New York: Oxford University Press, 1963), pp. 245-55.

established in a static and closed economy, and employed one hundred workers who were formerly underemployed. The wages of these workers would be designated as additional income; however only a small portion of said income would be used to purchase shoes. As there was no other source of additional purchasing power, and as exporting was an impossibility, there was no outlet for the remainder of the output, so the shoe factory would fail.

According to Rosenstein-Rodan, however, this failure would not occur if one hundred industrial and agricultural enterprises of this type were established, with 10,000 rather than one hundred workers (as before these workers would be formerly underemployed). These enterprises would be created so that a variety of industrial consumer products and foodstuffs could be produced and their productivity level would of course be higher. Each individual industry provides a market for the products of the other industries.

Thus an additional income would be created which could be spent on the additional production, and thus the success of the total investment would be assured.

In this case, the risk of not being able to sell the output would be minimized and this would provide the initial incentive to expand. Further incentives would be generated due to the firm's position as a growing firm in a growing industry with its growing markets. Growth at a rapid rate

would be possible because the proposed industry would permit entrepreneurs to take advantage of the "external economies" available within the unit, but which would not be available to individual firms because of the divergence of "social marginal net product." As Rosenstein-Rodan said:

If the industrialization of international depressed areas were to rely entirely on the normal incentive of private entrepreneurs, the process would not only be very much slower, the rate of investment smaller and (consequently) the national income lower, but the whole economic structure of the region would be different.⁸

It should be noted that Rosenstein-Rodan was not attempting to provide a general theory of economic development. He was referring specifically to an area in which a framework of social over-head capital in the form of railroads, canals, hydroelectric plants, universities, and an industrial labour force already existed. Thus, it was left to Nurkse to provide a general theory of "balanced growth."

Nurkse proceeds on the assumptions that the domestic market is limited due to mass poverty resulting from low productivity, private investment is discouraged because of the lack of a market, and conditions of less than perfect competition exist. Additionally he assumes a given

⁸Ibid., pp. 250-1.

labour force equipped with an increasing stock of capital and a great fund of unused technical knowledge.⁹ Then he comes to the conclusion that "The solution seems to be a balanced pattern of investment in a number of different industries, so that people working more productively with more capital and improved techniques, become each other's customers."¹⁰

In presenting the theory, Nurkse neither eliminates foreign trade nor relies upon it. It is implicit in the theory that the balanced growth can take place leaving existing foreign trade unchanged. The new industrial production is to be domestically consumed. Nurkse said:

We are in the classical world of Say's law. In underdeveloped areas there is no deflationary gap through excessive savings. Production creates its own demand and the size of the market depends on the volume of production.¹¹

However, he makes a distinction between "social overhead capital" and "direct investment" in the goods

⁹R. Nurkse, "Balanced Growth on Static Assumption", Economic Journal, Vol. 66, June, 1965, pp. 365-367.

¹⁰R. Nurkse, "Balanced and Unbalanced Growth," Equilibrium and Growth in the World Economy, ed. Harberler and Stern (Cambridge: Harvard University Press, 1961), p. 247.

¹¹R. Nurkse, Problem of Capital Formation in Underdeveloped Countries (New York: Oxford University Press, 1953), pp. 8-9.

producing industries. The function of government should be to provide the social overhead capital within which the balanced industrial unit can attain its full potential. The "indivisibility" and "lumpy" nature of the large-scale social investments, requires the infrastructure of an economy to be built up ahead of demand and, therefore, government interference is warranted.

Therefore, it is apparent that the balanced growth doctrine applies only to the direct investment; as Nurkse said:

the case for balanced growth is concerned with establishing a pattern of mutually supporting investments over a range of industries wide enough to overcome the frustration of isolated advance, in order precisely to create a forward momentum of growth. The particular factors that determine the optimum pattern of diversification have to do with technology, physical conditions and other circumstances that vary from country to country. There can be no standard prescription of universal applicability.¹²

In comparing Rosenstein-Rodan's theory to that of Nurkse it is to be noted that both assume limited supplies of foreign capital and the formation of a broadly based industrial complex. Both of them presume an already well developed infrastructure and existing but unused resources. A minor difference is the assumption of a surplus population supply by Rosenstein-Rodan and a fixed supply by

¹²Nurkse, R., "Balanced and Unbalanced Growth", op. cit., p. 252.

Nurkse. The two writers agree that the existing agricultural sector would have to support the new industrial sector either by employing its previously unused resources or increasing its productivity and, that, presumably, the foodstuffs required by the new industrial workers would exactly balance the demand created among the agrarian population for the new industrial goods.

Having discussed the case for balanced growth, we then come to the conclusion that it is unrealistic to consider agricultural development and industrialization as separate or conflicting. There is no simple choice between developing either industry or agriculture; the two sectors are interrelated and interdependent. Improvement in the productivity of agriculture is one of the most important means of promoting industrialization. At the same time, agricultural improvements can not go very far unless there is industrial development to take up the released manpower and to provide a solid technical base for provision of the equipment and services essential for modernized agriculture. In the short-run, the relationship between agriculture and industry may be competitive in the sense that the assistance given by the State to one sector of the economy may be at the expense of the other. But in the long-run, which is of prime importance, it is complementary. It has been demonstrated in the economic history of

many industrialized countries that improvement in agriculture fostered and aided the evolution and growth of industry. As Bauer and Yamey said:

The leading industrialized countries of today were once predominantly agricultural, and economic histories have traced the various ways in which a prosperous and expanding agriculture formed the basis for the current or subsequent establishment and expansion of manufacturing.¹³

If agriculture fails to provide food for growing industrial and urban populations, then much-needed capital will have to be spent on importing foodstuffs and development will be retarded. Conversely, if agriculture can increase its production for export of primary raw materials, then more foreign exchange is available to aid development of the whole economy. A more prosperous agricultural sector is also needed to provide a market for the products of the new industries. At the moment the poverty of agriculturists, due to low productivity, and therefore the smallness of the available market for manufactured goods is probably the greatest hindrance to development. Any improvement in agricultural productivity should act as a stimulus to industrial development.

¹³P.T. Bauer and B.S. Yamey, The Economics of Underdeveloped Countries (New York: Oxford University Press, 1959), p. 235.

W. W. Rostow, in discussing the preconditions for industrialization, stresses the role of agriculture as a supplier of food and materials, a market for industrial products, and as a source of saving for the industrial sector.¹⁴ This important role of agriculture is further illustrated by the following passage from a treatise by the UN Department of Economic and Social Affairs:

The development of agriculture, simultaneously with, if not in advance of, manufacturing is needed to achieve steady economic progress and avoid structural disequilibria which may later be the source of hardship. Over-rapid and unbalanced growth of the industrial sector, unaccompanied by complementary changes in the agricultural sector, may give rise to phenomena which in the long run are likely to retard economic development--balance of payments difficulties, inflation, excessive urbanization, the disruption of accepted social patterns.¹⁵

Rostow argues that rising real incomes in agriculture, rooted in increased productivity, can act as an important stimulus to new modern industrial sectors. Essentially the same argument was made by Bukharin during the industrialization debates in the Soviet Union during the 1920's. He argued that improving the peasant economy

¹⁴W. W. Rostow, The Stages of Economic Growth (England: Cambridge University Press, 1962), pp. 22-24.

¹⁵United Nations, Process and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), p. 3.

and increasing the demand for industrial products could stimulate industrial advance.¹⁶ The Thai Government envisages the same pattern of economic development.

Hence successful launching programs of industrialization depends upon improvements that can be attained, the lack of which would be likely to jeopardize the success of the new ventures. From this it follows that systematic improvement (and therefore investment) in agriculture must be a foremost task of an underdeveloped country like Thailand. The aim should be mutual self-support between these two sectors of the economy, whereby agriculture's surplus population may be siphoned off into industry, as agriculture, under the stimulus of great demand, becomes more efficient and industry in turn raises the market for agricultural products.

Further, with reference to the theory of balanced development, it was the bitter lesson learned from the war time shortage of goods and services that Thailand must be industrialized, at least to the point of self-sufficiency in a number of essential items in order to avoid repetition

¹⁶Alexander Erlic, The Soviet Industrialization Debate, 1924-28 (Cambridge: Harvard University Press, 1960), pp. 8-23.

of such economic hardships. In addition, self-sufficient development is important for economic independence.¹⁷

Priorities and the Problem of Balanced Growth.

The aim of all development must be to guarantee that the utilization of existing resources is directed toward the achievement of desired objectives. Development policy should therefore be decided by the nature of the goals and objectives set. Some such objectives are elimination of unemployment, growth of per capita income, achievement of balance of payments equilibrium etc. As all or most of these objectives are necessary to the desired development, the criterion for the establishment of economic policies must be the comparative importance of the above objectives, given the structure and system of values of the specific country dealt with.

A system of priorities within this list of desired objectives, must be established, for as a general rule the resources which are available for development (especially capital for investment) are not sufficient for the simultaneous attainment of all of the major goals set.

¹⁷ Simon Kuznets and Joseph J. Spengler, Economic Growth: Brazil, India and Japan (Durham, N.C.: Duke University Press, 1955), p. 65.

In Thailand priorities are established within the framework of comprehensive development plans, and constitute an essential part of the National Economic Development Plan.

It is a basic principle of rational development policy to ensure the most effective use of existing resources, particularly those in short supply (e.g., capital). However, as has been pointed out by Higgins: "It would be a mistake to choose priorities for investment only on the basis of the lowest possible incremental capital-output ratios ($ICOR = I / Y$)."¹⁸ Rather, one should always select the investment yielding the maximum output for the minimum outlay. The capital-output ratio is useful in measuring investment requirements, but it is subject to far too many qualifications to be used as the sole criterion in investment decisions.

First, it is very difficult to measure capital-output ratios accurately; these ratios only become reliable if the data has been available over a long period. This is not likely to be the case in underdeveloped countries, due to statistical difficulties in computing both investment and output.

¹⁸ Benjamin Higgins, Economic Development: Problems, Principles and Policies (New York: W.W. Norton & Company, Inc., 1959), pp. 643-644.

Certainly the margin of error in the ratios is large enough that the accuracy of measurement of the relationship between output and investment is usually dubious. As Professor Everett Hagen has pointed out:

Measurement of ICOR for any given country involves obtaining conceptually comparable wealth estimates for at least two different dates, income estimates for the same dates, and calculating the ratio between the increment in capital and that in income. The dates must be far enough apart in time so that the probable margin of error in the estimate of capital and income at each date is small relative to the increment between the dates. But long income series are available for only a relatively few countries. Measurements of the aggregate capital stock of various countries are even less common, and are imprecise. For these reasons the number of countries is small indeed for which the necessary set of estimates can be made without a feeling that the statistical margin of error present renders the conclusion very doubtful.¹⁹

Secondly, this ratio does not take into consideration the duration of the investment, (i.e., the length of time during which invested capital can be counted upon to stay productive). Therefore, the time it takes for a unit of equipment to become obsolete is an important factor. If it wears out in five years and has to be replaced, it is naturally a less profitable investment than another unit of equipment which (although its capital output ratio may be higher) can be expected to continue to function for another twenty years. For instance, the creation of social

¹⁹Ibid., pp. 642-43.

overhead capital or infrastructure will inevitably involve a very great expenditure of capital, with capital-output ratios highest in any economic system.²⁰

The results of such investments are not likely to give discernible short term returns, but in the long run they will have more than offset the original cost.

In underdeveloped countries these social overheads are necessary to further industrial growth, regardless of their exact capital-output ratios (which are usually high). There is, however, practically no way to measure the output of social overhead (such as dams and roads) with any degree of exactitude.

As the capital-output ratio does not take into account the influence of such additional factors as time duration, it cannot be used as the sole criterion for the establishment of a development program. However, in view of the fact that capital availability is of prime importance in economic development, the capital-output ratio does

²⁰Wassily W. Leontief, Studies of the Structure of American Economy (New York: Oxford University Press, 1953), p. 219.

The studies show that transportation, communications and public utilities tend to have the highest capital-output ratios; next come the extractive industries-- agriculture, mining, and fishing--and the processing of mineral products, including iron and steel; finally come all the other industries including construction and transportation equipment.

serve as a rough guide to the most productive allocation of resources.

The maximizing of the Social Marginal Productivity would serve as a better criterion. The social marginal productivity of each category of investment (the criterion by which resources are allocated in the manner most conducive to high productivity) must be established on the basis of equilibrium or "shadow prices," a concept emphasized by Jan Tinbergen in his book, "The Design of Development" who calls them "accounting prices." The prices must also account for all the direct and indirect factors of cost and yields. As a matter of fact social marginal productivity is the criteria put forward by A.E. Kahn.²¹ According to this, one should try to maximize the social marginal productivity of capital. The objective of this criterion, is the maximization of output not just in fields in which we are investing but for the economy as a whole.

Although rising industrial development and agricultural productivity certainly contribute, both to each other, and (a necessary corollary) to overall economic growth, it is still extremely difficult to establish priorities. For while balancing of agriculture and industrial

²¹A.E. Kahn, "Investment Criteria in Development Programs," Quarterly Journal of Economics, Feb., 1951.

development would seem a simple enough solution, in reality, there is always, in all underdeveloped countries the problem of limited resources, especially capital resources. If allocation of these resources is based on the criterion of balance they may become so thinly spread that they do not reach those certain minimum levels which must be exceeded in order that income and productivity be raised to any significant degree. As Singer writes:

The advantages of multiple development may make interesting reading for economists, but they are gloomy news indeed for the underdeveloped countries. The initial resources for simultaneous developments on many fronts are generally lacking.²²

Therefore, it is impossible to avoid formulating policies which encourage (at least in the short-run) rather quite different rates of development in, for example, agricultural and industrial sectors. Nonetheless, some consideration of balance is unavoidable in the sense of "the minimizing of the waste of productive resources that results when one sector of the economy acts for an unnecessarily long time as the effective limiting factor (bottle-neck) on the growth of other sectors."²³

²²A.O. Hirshman, The Strategy of Economic Development (London: Yale University Press, 1958), p. 53.

²³Ansley J. Coale and Edgar M. Hoover, Population Growth and Economic Development in Low Income Countries (New Jersey: Princeton University Press, 1958), p. 119.

Therefore, although at a first examination the principle of balanced agricultural and industrial development would appear quite feasible, closer examination will reveal the difficulty of executing it, especially within those countries whose aim is the launching, rather than the sustaining of economic growth. A choice is necessary in any given development plan, the major objective of which is the concentration of limited resources on those strategic investments which will remove the restrictive bottlenecks of the situation at home. Economists, admitting their choice, divide into two groups regarding their opinion on the relative emphasis due to agricultural and industrial investment. A. E. Kahn, Jacob Viner, Coale and Hoover are included in the group which contends that efforts to increase food supply are of primary importance because of the high demand and great need for additional food or because the highest marginal social productivity of capital lies in agriculture since agriculture is the largest sector and employs the biggest percentage of population.²⁴ Thus Coale and Hoover conclude for India that:

very substantial progress in that most backward part of the economy (agriculture) is a prerequisite to successful development of the economy as a whole: and

²⁴Harvey Leibenstein, Economic Backwardness and Economic Growth (New York: John Wiley, 1957), p. 261.

that if one sector limits the growth of the other, it is more likely to be a case of agricultural growth limiting nonagricultural than vice versa.²⁵

Within the second group are found several (such as Albert Hirshman and Higgins) who, although they acknowledge that it is necessary to raise agricultural productivity, conclude that only by giving top priority to the industrialization program can this be achieved. Higgins argues for this position that cumulative improvement in agricultural productivity can only be achieved through a public policy which is designed to make labour comparatively scarce in agriculture by simultaneously shifting to a more mechanized and larger-scale agriculture, and encouraging a rapid industrialization rate. While acknowledging that this type of policy demands heavy investment in both sectors-- industrial and agricultural--he also warns of the pitfalls encountered when a country has no agricultural revolution, and when the agricultural sector is neglected. Even so, Higgins' position requires a necessary emphasis on industrialization, for without it, farm mechanization and the absorption of surplus farm labour would not occur.

The points of view of the two groups are not opposite, yet the position of the second group seems more

²⁵Coale and Hoover, op. cit., p. 120.

open to attack; especially if it is intended to apply in the short run economic planning of a country with an agricultural structure and a high rate of population growth like that of Thailand.

To be sure, it is highly improbable that any under-developed country can afford, at any stage, to concentrate all of its investments in the area of either agricultural or industrial development. However, a shift of emphasis from agricultural to industrial development only becomes practicable when the agricultural sector has been able to achieve and sustain a reliable surplus, or has at least succeeded in reducing the food deficit to a magnitude which expanding non-food might be expected to cover in the near future. A report of the second group of experts on programming techniques suggests that:

While emphasizing the importance of industry,, we do not intend to imply any general priority for its development over agriculture or other sectors of the economy. The best composition of output is determined by natural resources, the composition of demand, and the country's trading opportunities.²⁶

²⁶United Nations, Formulating Industrial Development Programs, with special reference to Asia and the Far East (Bangkok: Economic Commission For Asia and the Far East, 1961), p. 2.

Economic Development With Unlimited Supplies of Labour.

Many underdeveloped countries such as Indonesia, India and China are characterized by population pressure. Even though this case has not occurred in Thailand, however, with the high rate of population increase it is worthwhile to study the theory of Lewis' model. The purpose of developing Lewis' model is to show that if a country has severe population pressure on land, the way to solve this problem is through the industrial sector. Development in the industrial sector helps to release workers from the agricultural sector which is overcrowded. This study will proceed at first to the study of the pure theory of Lewis' model, and finally to the case of unlimited supplies of labour with reference to Thailand.

For W. A. Lewis, a country with an unlimited supply of labour is one where:

population is so large relative to capital and natural resources, that there are large sectors of the economy where the marginal productivity of labour is negligible, zero, or even negative.²⁷

Therefore, the wage in these sectors is a subsistence wage. The supply of unskilled labour is unlimited but the

²⁷W. A. Lewis, "Economic Development with Unlimited Supplies of Labour, Studies in Economic Development, ed. Bernard Okun & W. Richardson (New York: Holt, Rinehart and Winston, Inc., 1962), p. 281.

supply of skilled labour can be limited owing to the limited scope of specific kinds of training.

Lewis postulates a dual economy with the following characteristics:

1. A subsistence sector with such a large labour force, that the marginal productivity of labour is zero or negative (see figure 2). In this sector, output per person is lower than in the capitalist sector, because it is not fructified by capital.

Wherever there is excess population, we must infer that the marginal product is below average product. If the population expands, the average level of consumption will drop, because the additional labour contributes less than the average worker has previously contributed and the average product per worker is lowered.

The relationship which exists between total product and total population is demonstrated in Figure 2. The slope of the vector from the origin to any point on the curve reflects the average product per head. It reaches the maximum at A (here the angle AOL is largest) and after this point it declines with further increase in population. At B, the marginal product becomes zero (at B the average product measured by angle BOM may still be substantial). The marginal product will become negative and the average product continue to be reduced if population increases beyond M.

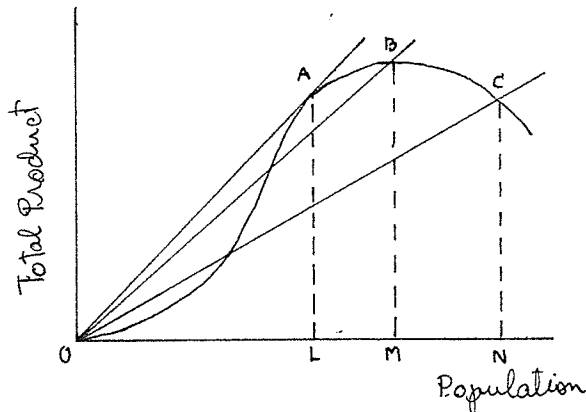


FIGURE 2

RELATIONSHIP BETWEEN TOTAL PRODUCT
AND TOTAL POPULATION

2. A capital sector with the expansion potential for creating new capital (capital widening) and employing more labour out of the profits it gains.

Let us now examine the relationship which exists between the two sectors. As the capitalist sector expands, workers will be drawn from the subsistence sector. The wage rate paid for each additional labourer employed from the subsistence sector is determined basically by the minimum requirement for subsistence, which may equal the average product per man in subsistence agriculture. If the real wage in nonagricultural industry is not (at least) equal to the average product on the land, the peasant farmer will have no inducement to leave his family farm. In order to attract the surplus labour, Lewis suggests an additional wage of some 30 per cent in the nonagricultural sector.

The process of economic expansion. The use made of capitalist surplus is the most important single element in this process. If this surplus is reinvested in order to create new capital, the capitalist sector will become larger, so that a greater number of people are removed from the subsistence sector into capitalist employment. This in turn makes the surplus even larger, so that even more capital is formed and so the process continues until the absorption of surplus labour is complete.²⁸

During the first stage, when output per worker in the capitalist sector is higher than wages per worker, entrepreneurs enjoy a surplus which they save and invest.

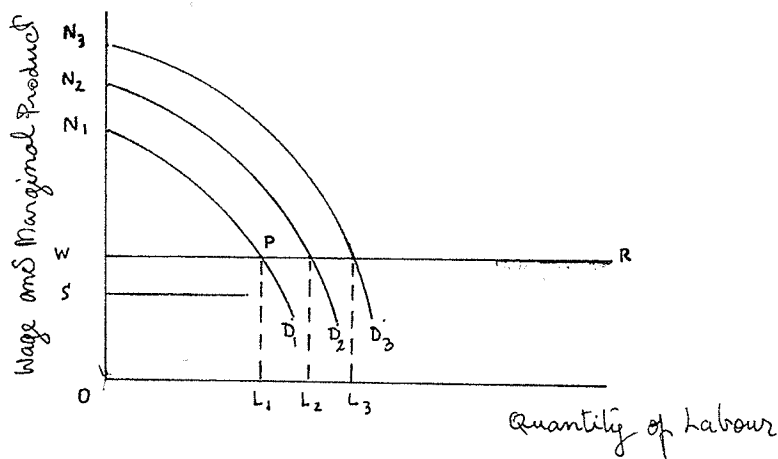


FIGURE 3

PROCESS OF LEWIS MODEL

²⁸Ibid., p. 285.

Figure 3 illustrates the process of the Lewis Model, wherein OS represents the subsistence earnings, OW the current real wage rate in the capitalist sector, WR the perfectly elastic supply of labour, and N_1D_1, N_2D_2 etc., the marginal productivity schedule of labour. Assuming an initial fixed amount of capital, and assuming that profit maximization occurs where the marginal productivity of labour equals the current real wage rate, then initially, the amount of labour employed is OL_1 .

The surplus labour earns what it can in the subsistence sector. The total product N_1PL_1O is comprised of wages ($OWPL_1$) and profits, or the capitalist's surplus (WPN_1).

The process of expansion is as follows: Reinvestment of the initial surplus (WPN_1) increases the amount of fixed capital, and with technological improvement, thereby raising the schedule of the marginal productivity of labour to, say, N_2D_2 , and the demand for labour to OL_2 . The expansion continues in this way.²⁹

To Lewis, profit constitutes the major source of savings, so an increase in capitalist profit is an integral and necessary part of this process. Expansion of the

²⁹Gerald N. Meier, Leading Issues in Development Economics (New York: Oxford University Press, 1964), p. 86.

capitalist sector results in an increase in the share of profits in the national income; and savings and capital formation also increase as a proportion of national income, because profits are the major source of savings. As Lewis said:

The model says that if unlimited supplies of labour are available at a constant real wage, and if any part of profits is reinvested in productive capacity, profits and capital formation will grow continuously relatively to the national income.³⁰

"In the neo-classical model capital can be created only by withdrawing resources from producing consumer goods"³¹ (due to scarce resources we can do one or the other). Surplus labour exists in the Lewis model, and it is possible to create capital without a reduction in the total output of consumer goods if the "marginal productivity" is zero, and if the creation of capital can be achieved without the accompanying withdrawal of scarce lands and capital from other uses. This argument implies that the production of additional consumers goods by surplus labour would require the utilization of additional land or capital, whereas production of capital goods, would not.

³⁰Lewis, op. cit., p. 290.

³¹Ibid., p. 292.

The building of roads or dams in ancient times required only labour and primitive tools.

Therefore, if a community lacks capital, and if there are unutilized resources available which can be set to creating capital, this step should be taken even though it means that money must be created to facilitate the financing of extra employment. This process does not involve a decrease in other output while the new capital is being created; and when it begins to be utilized, output and employment will rise just as they would if the capital which caused the use were financed not by credit creation, but out of profits. The distinction between capital financed by profit, and that financed by credit is in the immediate effect on prices and on income distribution, rather than in final effect on output.

The effect on price. A rise in price will occur when the surplus labour is put to capital formation financed by new money, because the amount of money increases, while the output of consumer goods remains constant for the time being. The fixed amount of consumer goods will be distributed to the newly employed workers. The output of consumer goods is reduced in the neo-classical model, and therefore the whole community is forced to save. The output of consumer goods is not reduced in this model-- there is a forced redistribution of income, but not forced savings.

The effect on distribution of income. The process of inflation need not continue forever, it comes to an end when voluntary savings increase to a point at which they equal the inflated level of investment.³² The capitalists will get back the new money used to finance capital formation, in the next round, in the form of a profit increase. Thus in a very short time profits, voluntary savings and capital formation can be raised to any desired level. Since the increase in profits will go to the capitalist class, the share of real national income received by other classes will fall.

The effect of government financing. In this section we will examine the effect of governmental inflation-financed capital formation.

In the first place, the money which the government spends will be regained in the form of taxes: the larger the government's share of marginal incomes, the larger the amount it will regain, and the faster its gain the smaller the effect on prices.³³ Conversely, if the government gets back less the price level will rise even higher. Finally however, when the output of products is increased, prices will fall or cease to rise. Therefore, only when a

³²Ibid., p. 293.

³³Ibid., p. 296.

government has assured itself that a large portion of the increase in money income can be regained by itself, should it consider deficit financing.

A second point is that, from the viewpoint of capital formation the ideal situation is that in which surplus money gets into the hands of those persons who will reinvest it productively. Only one class--the industrialist class, can be depended upon to reinvest its profits productively,³⁴ and even this class may fail, in some instances, to do so. The effect which an inflation will have on secondary capital formation therefore depends firstly on the size of the industrial class and secondly on whether the majority of the benefit goes to this class. If a country's industrial class is small, inflation will merely result in speculation in commodities and land, and in the hoarding of foreign exchange.

The final point to be noted is that of the relationship between capital and output. If it is intended that capital formation be financed by creation of credit, the best objectives are those which yield a large income in a short time. For example one would be ill-advised to use credit creation to finance the building of a school; rather it should be used to finance something which would give a

³⁴Ibid., p. 297.

quicker return, e.g., some agricultural programs such as fertilizers, water supplies or industrial plants, etc.

In summary, this model assumes an unlimited supply of labour in the subsistence sector in which the marginal productivity of labour is zero or negative. It means that a certain number of labourers can be removed from the subsistence sector without any adverse effect on the total production in this sector.

The average subsistence real income in the agricultural sector is given, and so also is the real wage in the capitalist sector. It is not possible, by inflation or otherwise, to reach a new equilibrium in which the capitalist surplus has increased at the expense of either of these. If, therefore, the capitalists begin to finance capital formation out of credit, they lower the share of others in GNP because a large part of the increase in national income will go to them in the form of profit. Wages would then be chasing prices continuously but for the fact that, since output is growing all the time, profits can be growing all the time without real income of others being reduced absolutely. Hence the part of the investment which is financed out of credit is diminishing all the time, until equilibrium is reached.

More investment implies more labour drawn from the subsistence into the capitalist sector. The second stage

is characterized by higher wage rates (because there are no more unlimited supplies of labour; in other words, supply function of labour becomes less than perfectly elastic); the higher ratio of capital to labour employed in the capitalist sector and a total capital stock that accumulates will increase so long as the capitalist sector grows. During this stage when capital catches up with the labour supply profits and wage rates are determined by the relative marginal productivities of the aggregate stock of capital and labour in the capitalist sector. As Viner said:

Real wages do not stay constant beyond this point; instead they rise as capital formation occurs. Thus the share of profits in the national income need not continue to increase, and investment no longer grows relative to the national income.³⁵

The Case of Unlimited Supplies of Labour and Thailand.

Thailand is not yet considered to be over populated. With a total population of 30 million and an area of 514,000 square kilometres, the density is 58 persons per square kilometre. The absence of any serious pressure of population on the land is reflected in the availability of a considerable amount of surplus rice and agricultural

³⁵Gerald M. Meier, Leading Issues in Development Economics, (New York: Oxford University Press, 1964), p. 86.

exports. Agricultural production could be increased by extending the area of cultivation, irrigation, new techniques of production, fertilizers, etc. With more export of agricultural products the country can earn more foreign exchange, which it needs to finance the import of capital goods. From the point of view that Thailand is not considered to be a labour surplus economy, and that agricultural production can be increased, industrialization is not an urgent need and agriculture should have the first priority to develop. An increase in agricultural production, besides helping to increase national income and earning of foreign exchange, can also help to stimulate the development of the industrial sector. If the industrial sector produces no food, its expansion increases the demand for food, raises the price of food in terms of industrial products, and so reduces profits to the industrialists. This is one of the senses in which industrialization is dependent upon agricultural improvement; it is not profitable to produce a growing volume of manufactures unless agricultural production is growing simultaneously. This is also why industrial and agrarian revolutions always go together, and why economies in which agriculture is stagnant do not show industrial development.

Although it is very reasonable for agriculture to have first priority for development, Thailand should not

neglect industrial development. What is required is a growing agricultural sector which can encourage and support the development of a viable industrial sector. If substantial improvements in the productivity of the agricultural sector are considered desirable, Thailand must take advantage of the modern capital-intensive technologies available for agricultural production from the developed nations of the world. From the standpoint of the labour question, the adoption of these modern techniques would result in the release of a considerable number of workers from the agricultural sector (which accounts for 80 per cent of the population). In future also there will be a need for an expanding industrial sector to absorb a growing labour force unless the present high rate of population growth in Thailand (3 per cent per annum) is reduced.

Industrialization then, while perhaps not urgently required at this moment, becomes an important, in fact crucial, consideration in the long run. However, in view of the economic, social and political disruption which has historically accompanied the development of an industrial sector, there is a need in a country such as Thailand for proper recognition of these facts, when development plans are conceived, with initial steps being taken far in advance of the physical commitments associated with industrialization.

CHAPTER IV

INDUSTRIAL RESOURCES AND BACKGROUND

Resources Base.

Economic prospects of a country cannot be gauged solely by cataloguing its known natural resources. But resources in themselves are valueless unless they harmonize with a complex network of other economic and social factors.... It is certainly wrong to dismiss the resource (including energy) base as unimportant; while not determining whether or not industry shall exist, it does exert an influence upon the character and intensity of any development that may occur.¹

The value of an economic resource is dependent upon the terms of availability of the requisite complementary factors of production, as well as upon the strength of the market demand for its products. In other words, the physical qualities and the technical efficiency of a resource are not the sole criteria of its value--rather the environment of a resource, comprised in part by a network of market influences, present and future, confers value upon it. Thus resource values are inter-dependent, and it is both misleading and somewhat arbitrary to treat particular resources, or categories of resources, as though they were isolated. National resources are greatly influenced

¹Alan B. Mountjoy, Industrialization and Under-developed Countries (London: Hutchinson & Co. Ltd., 1963), p. 120.

by such factors as the state of technology, the policies of the government and its efficiency, methods of organization or production and the general organization of the society; and must therefore be dealt with in a co-ordinated manner, and their investigation and utilization planned for long-term requirements. An important factor determining the possible rate of growth of an economy is this necessary study of resources, and the establishment of possibilities before needs actually arise.

Natural resources give Thailand a large potential for agricultural and industrial production and their rapid development is an essential condition for the achievement of a self-reliant and self-sustained economy over the next two or three plan periods. Moreover, for balanced development it is necessary to assess availabilities, requirements and possibilities in relation to each of the principal regions within the country.

Thai industry, like agriculture, is striking in its development and diversity. In part this can be attributed to the broad base of domestic raw materials and manpower resources.

1. Raw materials. Thailand is an important producer of numerous industrial raw materials, some of which are currently exported in considerable volume. Some other industrial materials, now in more limited supply,

particularly agriculture and forest products, could be produced readily as the incentive for an increased demand developed within the country. Conversely, however, some raw materials of importance in industrial development, particularly in the field of metals and minerals, have so far not been found in Thailand and must be imported.

Agricultural products of interest which are actually or potentially available in volume for industrial processing include rubber; oilseeds of many kinds for both edible and industrial oils, numerous fibres including jute, kenaf, cotton, and kapok; corn, tapioca, sugar-cane and a great variety of fruits and vegetables in large volume.

The Gulf of Thailand and the Indian Ocean offer fishing grounds both of which may have a potential for further exploration and development, particularly through the use of larger boats and more adequate equipment, gear and technical facilities now gradually coming into use in deep sea fishing. Because of its great size and many varieties of fish, the Indian Ocean undoubtedly offers greater potential in this respect. Traditional in-shore methods are used for the most part in the Gulf of Thailand and these are barely able to satisfy the nation's domestic needs.

It is estimated that forests cover over 50 per cent of the area of Thailand, and forest products have been of

considerable importance in the economy. The country is self-sufficient in the production of lumber and exports considerable quantities thereof, the most important type being teak. There are various other hard and soft woods, bamboo, and rattan, in substantial quantities, though often widely scattered. Overcutting without reforestation and other wasteful practices have reduced available supplies. In some areas, however, conservation programmes of the government are now in progress for the purpose of correcting this situation and developing forest resources. Such programmes, including specific plantation planting of some species should provide wood, pulp material and other forest products for potential industrial uses.

2. Human resources. Human resources are one of the crucially important factors in the process of economic development, for in the final analysis, the success or failure of a development program hinges on the availability of the people who plan, perceive and execute investment decisions.

The human factor is very important in that it is necessary to complement the supply of capital. Capital, often called the key to development for underdeveloped countries, cannot itself create development, but must be guided by humans. The success of a country in industrializing depends to a large extent upon its human resources

and their development potential. As Professor Kuznets said:

The major capital stock of an industrially advanced country is not its physical equipment; it is the body of knowledge amassed from tested finding and the capacity and training of the population to use this knowledge effectively.²

A large supply of low-cost labour is one of the prime resources of industry in Thailand. Broadly speaking, labour is one of the major parts of the total cost of production in many branches of industries. The wide differences in the wage rates prevailing in Thailand (see Table IX) and in some developed countries has presented an opportunity to obtain sufficient saving in labour cost so as to bring total cost of production down to a level comparable with advanced countries. The advantage of most underdeveloped countries including Thailand is the availability of manpower (from disguised unemployment and seasonal unemployment) but is still short of a skilled labour force. In order that the supply of skilled labour matches the demand for it, the government should undertake a program to provide the required training. However,

²Simon Kuznets, "Towards a Theory of Economic Growth," a paper read at Columbia University, New York: 1954, cited by United Nations, Processes and Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), p. 5.

various steps have been taken by the government such as opening many vocational schools and technical colleges. These schools train their students in various branches of mechanical trades such as electrical, automechanics, and so forth. In addition to the government undertaking training programs, many private companies also train their workers on the job. Owing to the lack of data, only the number of graduate students from vocational schools can be given from 1958 to 1962.

TABLE VIII
STUDENT GRADUATES FROM VOCATIONAL SCHOOLS

Year	Certificates Granted
1958	13,426
1959	15,270
1960	17,211
1961	17,280
1962	17,311

SOURCE: Ministry of Education.

The problem of how to induce these workers to come to receive the training is not hard. As Jacob Viner said:

It seems to be a common experience that it is not difficult to train people to new methods, to the use of machinery, to new products, once it is made clear that acceptance of the training brings substantial and prompt economic reward.³

³Jacob Viner, "The Economic Development," The Economics of Development, ed. A.N. Agarwala and S.P. Singh (New York: Oxford University Press, 1963), p. 1.

The objective of training should be pointed to a particular purpose. However, in general, flexibility should be a key element in any solution which is adopted to counterbalance the changeability which is inherent when industrial development takes place, and the variety of technical and professional qualifications required at each stage. The choice of an unduly rigid solution will be incompatible with the productive capacity and skill required by the industry in terms of quantity and quality.

A second point, which has its origin in the conditions discussed above concerns the necessity of maintaining a close and direct coordination between manufacturing and training programs so that policies can be adapted to the constant change in manpower requirements that are taking place all the time during the course of development.

It is also obvious that training programs of a technical nature are not a substitute for basic education, which is being provided by a general school curriculum. Those educational establishments, whose purpose is to provide the whole population with a broad education, will do very well in nurturing qualities like development of certain conditions of thought and mental attitude, adaptability, and ability to acquire new approaches and techniques as the need arises. These are basic qualifications for the staff of many of the new industrial branches.

Significant advances have been made, in Thailand, in the fields of education, training and public health which will contribute to the economic well-being of the country and the development of her human resources. Compulsory education has been extended from four years to seven years. School systems from the primary grades to the university level have been expanded and improved in the plan, curricula, and teaching staffs. Numerous technical and vocational schools have been established to provide training for industry.

Therefore, although the labour force in Thailand at present is largely unskilled, there is an ever-growing number, both in absolute and percentage terms, of skilled and trained workers in the field of industrial crafts.

A general indication of prevailing labour rates in the Bangkok area is given in the following tabulation of representative hourly wages rate for work in certain broad categories. The average wage in a number of the better shops surveyed was actually somewhat below the mid-point of the range shown in the table.

TABLE IX
LABOUR RATES IN BANGKOK AREA

Job Categories	Hourly Rate Range	
	Bahts	Cents(U. S.)
General Labour	2.5 to 4.0	12.5 to 20.0
Assembly and other Light Tasks	2.0 " 3.4	10.0 " 16.8
Service (Warehouse men, Fork Truck Operator, Janitors, etc.)	3.0 " 5.0	15.0 " 25.0
Welders	4.5 " 6.6	22.5 " 33.0
Machine Tool Operators	4.0 " 8.3	20.0 " 41.5
Maintenance Mechanic, First Class	4.0 " 8.0	20.0 " 40.0
Plumbers	4.8 " 8.0	24.0 " 40.0
Carpenters, Electricians	4.1 " 8.3	20.5 " 41.5

NOTE: 1 Baht = 5 Cents (U. S.)

SOURCE: United States Operations Mission To Thailand.

Organization of labour unions is contrary to laws currently in effect in Thailand and no unions exist at this time. Relations between employers and workers have generally been harmonious and labour unrest is rare. A Thai Government spokesman announced in November 1965 that the status of the Labour Bureau of the Public Welfare Department was soon to be raised to departmental level in view of the rapidly increasing number of workers in industry. As a result of this change labour will probably be accorded a greater freedom of organization.

Characteristics of Thai Industry and Its Problems.

Broadly speaking as a country develops, the percentage contribution of the industrial sector to gross domestic product should increase. The economy of the country should not rely too much on the agricultural sector. As population increases, a large percentage of the people will be in the agricultural sector. Since the land cannot be extended indefinitely, the industrial sector will have to play an increasingly more important role in absorbing the growing labour force. The role of the agricultural sector in the economy will decline as the country develops. That this has indeed occurred in Thailand can be seen from the following figures. The share of the industrial sector⁴ in Thailand in her gross domestic product has increased from 17.58 per cent in 1955 to 19.53 per cent in 1963 (see Table X, Item 2; see also Figure 5). The share of manufacturing alone has not improved during the same period, having contributed only 11.73 per cent of GDP in 1963 and 11.78 in 1955 (see Table X, Item 2.1). However, the index of growth of manufacturing has increased from 100 in 1955 to 170.82 in 1963 (see Table XI). Thus the rate of growth

⁴Industrial sector are those activities in mining and quarrying; manufacturing; construction; electricity, gas and water.

TABLE X

DISTRIBUTION OF GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN

Year	'56	'57	'58	'59	'60	'61	'62	'63
1. Agriculture* % of GDP	16,568 42.00	16,486 39.17	16,836 38.63	17,775 36.67	20,659 37.42	21,357 36.71	22,452 35.57	23,722 35.06
2. Industry** % of GDP (2.1 % of Manu- facturing alone)	6,933 17.58 (11.78)	7,806 18.55 (11.43)	8,043 18.46 (11.95)	8,980 18.53 (11.41)	9,770 17.70 (10.66)	10,619 18.25 (11.07)	12,217 19.35 (11.61)	13,212 19.53 (11.73)
3. Transportation & Communication % of GDP	2,014 5.10	2,497 5.93	2,530 5.80	3,232 6.67	4,333 7.85	4,644 7.98	5,020 7.95	5,751 8.51
4. Trade & Services % of GDP	13,932 35.32	14,793 36.35	16,172 37.11	18,488 38.13	20,436 37.03	21,559 37.06	23,438 37.13	24,965 36.90
5. Total GDP	39,474 100.00	42,088 100.00	43,581 100.00	48,475 100.00	55,191 100.00	58,179 100.00	63,127 100.00	67,650 100.00

SOURCE: Calculated from Yearbook of National Accounts Statistics, 1965.

Note : *Agriculture: Agriculture
Forestry
Fishing

**Industry: Mining and Quarrying
Manufacturing
Construction
Electricity, Gas and Water

GNP in millions
of bahts

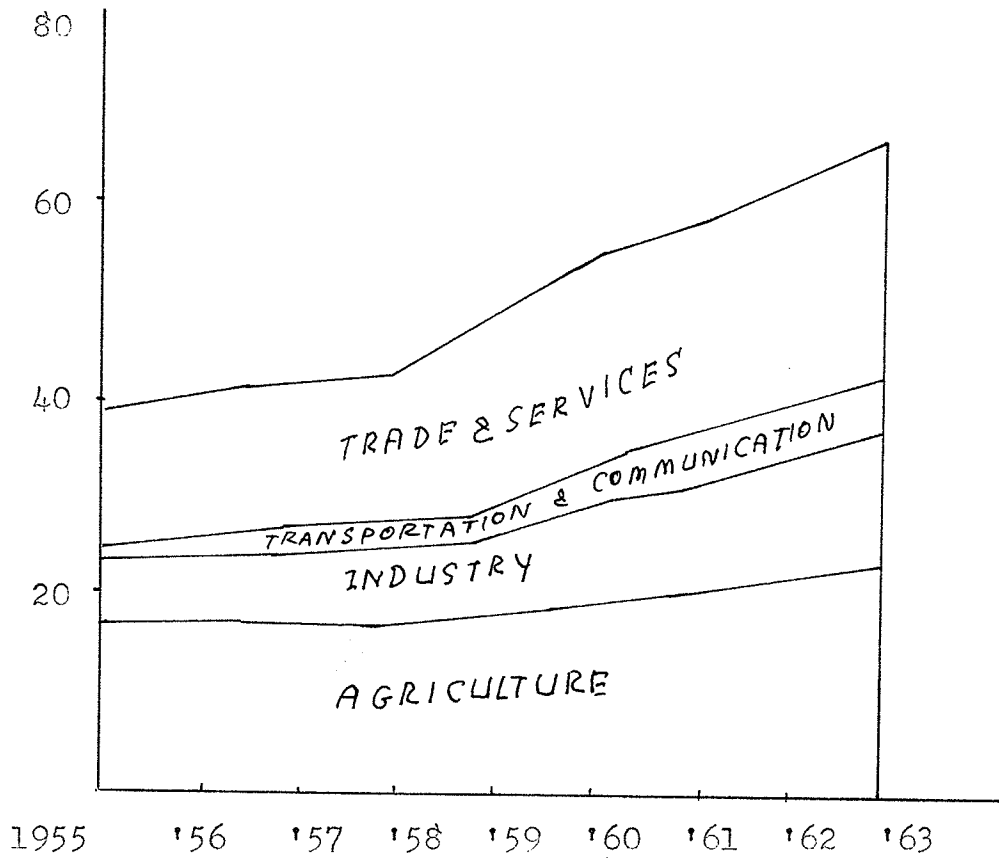


FIGURE 5

GROSS DOMESTIC PRODUCT BY INDUSTRIAL ORIGIN, 1955-1963
(BASED ON DATA FROM TABLE X)

TABLE XI

INDEX OF GROSS DOMESTIC PRODUCT AND INDUSTRIAL ORIGIN
1955-1963 (BASED ON 1955)

Year	1955	'56	'57	'58	'59	'60	'61	'62	'63
1. Agriculture	100.0	100.1	95.5	101.6	107.3	124.6	128.9	135.5	143.2
2. Industry	100.0	108.2	112.6	116.0	129.5	140.9	153.2	176.2	190.6
(2.1 Manufacturing)	(100.0)	107.0	103.5	112.1	119.0	126.6	138.6	157.7	170.8
3. Transportation & Communication	100.0	109.7	124.0	125.6	160.5	215.1	230.6	249.3	285.6
4. Trade & Services	100.0	106.2	109.8	116.1	132.7	146.7	154.7	168.2	179.2
5. Total GDP	100.0	104.2	106.6	110.4	122.8	139.9	147.5	160.0	171.5

SOURCE: Calculated from Yearbook of National Accounts Statistic, 1965.

TABLE XII

INDEX NUMBER OF MANUFACTURING GROWTH FOR SOME
COUNTRIES IN ASIA 1955-1963 (BASED ON 1955)

Year	1955	'56	'57	'58	'59	'60	'61	'62	'63	% of average annual growth
Thailand	100.0	107.0	103.5	112.1	119.0	126.6	138.6	157.7	170.8	7.8
Burma	100.0	120.0	147.5	164.2	181.3	205.7	224.6	249.2	285.7	20.6
Pakistan	100.0	113.6	127.3	118.3	131.8	145.5	159.1	177.3	195.5	10.6
Philippines	100.0	119.4	141.7	167.5	169.9	181.3	208.8	234.7	268.3	18.7
Taiwan	100.0	120.7	149.9	154.6	195.5	226.1	259.9	294.4	383.7	31.5

SOURCE: Calculated from Yearbook of National Accounts Statistic, 1965.

was about 7.8 per cent per annum. The index of growth of the industrial sector has increased from 100 in 1955 to 190.57 in 1963. Thus, the rate of growth was 10.6 per cent per annum.

In comparing the rate of growth of manufacturing in Thailand to some other countries in the same region, Table III shows that the rate of growth of manufacturing in Thailand was lower than in the others.

In 1963, the share of manufacturing alone to gross domestic product was approximately 12 per cent (refer to Table X, Item 2.1), and provides direct employment to an estimated 3.5 per cent of the active labour force. In 1950 there were only 290 factories, but by 1956 the number of factories had increased to 2,805. In 1965 there were approximately 110 types of industries with 27,336 factories registered with the Ministry of Industry. With the trend of increasing numbers of factories and various measures to encourage industrial development from the government, therefore, it can be expected that the share of manufacturing and its growth rate should continue to increase in the future.

The general characteristics of most industries in Thailand are small-scale and cottage industries which are largely ancillary to agriculture and forestry, such as rice mills, saw mills, sugar mills, flour mills and weaving

mills. There are a few large industries which employ more than 50 workers, engaged in the manufacturing of cement, sugar, cigarettes, gunny bags, and so forth. Some of these industries are state-owned. However, measured in terms of either personnel or capital employed, the government's share in manufacturing proper is small in comparison with the aggregate number of private establishments. Nevertheless, its influence in industry is disproportionately large. Almost inevitably the government stands alone in the field of public utilities. These utilities by themselves constitute a very considerable volume of industrial activity. But the government is also involved directly or indirectly in a large number of commercial and other industrial enterprises.

Several provinces in the North are known for their silk, teak carvings and lacquer wares. In the Northeast, there are such industries as sugar refining, gunny bag production and silk manufacturing. Silverwares and rubber processing industries are found in the South. Provinces along the eastern coast are mainly engaged in the production of tapioca flours, sugar and plywood. Small-scale and cottage industries which use much family labour account for about 95 per cent of the total number of the industrial establishments in the country. Some of their products such as silk, silverwares, lacquerwares and carvings are

exported. These small establishments are handicapped particularly by a lack of modern production processes and financial facilities. The Department of Industrial Promotion, Ministry of Industry, has taken several measures to assist these industries. These include the provision of information and technical advice. A plan to provide them with financial assistance through commercial banks (working in conjunction with the Loan Office for Small Industry Development, Department of Industrial Promotion) was launched in March 1964.

The government has increased its efforts to encourage the establishment of new industries and the modernization of existing ones. This is because the government realizes the importance of the industrial sector which can contribute to the progress of the nation in the future. The views of the government of the need and advantages of industrialization may be summed up in the following general principles:

1. In order that economic progress results, there must exist local industrial production which is able to meet a variety of needs. As well, the economy must be diversified, internal trade developed, and a basis for some measure of economic independence established. Economic independence here refers to freedom from "the inevitable vagaries of international price fluctuations,

shipping bottlenecks, monopolistic practices, boycotts, blockades, and war."⁵

2. If the economy of the country is based too exclusively on primary exports it becomes extremely vulnerable in times of crisis. The decline in raw materials prices may become so great as to be disastrous.

3. Industrialization will cause a fairly rapid rise in national income and wealth, partly because it makes possible the conversion of raw materials into consumer and producer goods. This expands the range of products.

4. Industrialization also improves the country's balance of payments, by producing import substitution goods. At the same time some of the products can be exported to earn foreign exchange. Thus balance of payment and foreign exchange position can be improved, and the economy will be more stable.

5. Industrialization also raises the average income of the population, thereby expanding the government's source of revenue from duties and taxes.

6. Industrialization is necessary where there is a high rate of population growth and where disguised

⁵Stanford Research Institute, The Role of Small-Scale Manufacturing in Economic Development, prepared for International Cooperation Administration (Stanford, California: Stanford Research, November, 1957), p. 147.

unemployment exists in the agricultural sector, for it provides the surplus population with employment and income. It is necessary too, in order that skills and experience be created that will lead, in the future, to more rapid increases in productivity and to an economy which is more flexible.

7. When local industry is developed, the country which has previously depended upon foreign countries, can gradually liberate itself from restrictions imposed on consumption by such barriers to the import trade as quotas and shortage of foreign exchange.

But we must keep in mind that, although industrialization is economically feasible for very large and diversified countries, a country such as Thailand would not be able to attain the same degree of self-sufficiency but rather, would suffer for the attempt. It should therefore limit its industrialization to a judicious selection of industries, based on the country's resources, as well as markets at home and abroad.

Some current trends and problems. It is an accepted fact that general displacement of agricultural activity by nonagricultural activity usually accompanies economic development⁶ as mentioned earlier. Thailand is no exception.

⁶Miguel Echenique, The Foundation and Process of Industrial Development in Puerto Rico (Santurce: Puerto Rico Planning Board, 1961), p. 1.

Changes in the economic structure of Thailand are gradually emerging. The agricultural contribution to gross domestic product declined from 42.00 per cent in 1955 to 35.06 per cent in 1965, while the combined share of industry (mining and quarrying; manufacturing; construction; electricity, gas and water) increased from 17.58 per cent to 19.53 per cent during the same period (see Table X). Although manufacturing is still somewhat associated with agriculture, it had begun to form an independent economic base. This upsurge of industry stems from the fact that the gain from industrial pursuits exceeds the gain from agriculture. In 1959, the annual average income per worker in agriculture was only U. S. \$182, while in industry, including mining, it was about U. S. \$664.

Although the structural change and the rate of industrial growth in the past are significant, some problems did exist. The fact that in many branches of industry, firms are too small to operate efficiently possess a major problem for Thai industry. There are a few large-scale factories such as cement and sugar, but these still face the problems of technical knowledge, new research and new techniques of production. These problems lead to the low efficiency of production and unduly high cost of production. Even industries which are comparatively new, for example those producing motors, tires and car assembly,

etc., serve a Thai market which is limited in size. In fact the size of market is not determined by number of the population but rather by the purchasing power of the people. One cannot say that the Thai market is bigger than the Canadian market, even though the population of Thailand at present is 30 millions compared to 20 millions in Canada. Low purchasing power results in both a small formation of capital and small investment. Therefore, the scope offered by the small market for the development of capital and economic advances in large-scale production, is limited.⁷ Too, the shortage of essential personnel (managerial and administrative people, and trained clerical workers) and the shortage of capital to buy expensive and good machines, has resulted in the furthering of low productivity.⁸

The problem of the obsolescence or insufficiency of equipment is another problem. Many Thai firms are not sufficiently mechanized, or are equipped with old machines which are not as efficient as new modern ones. Further

⁷A.B. Mountjoy, Industrialization and Underdeveloped Countries (London: Hutchinson & Co., Ltd., 1963), p. 101.

⁸A. B. Mountjoy, "Problems of Industrialization: An Egyptian Example," Indian Geographic Journal Souvenir, 1951, p. 20.

complications occur because those plants which are modern and well-equipped are likely to be handicapped because they are dependent upon components and materials which must come from less efficient suppliers (such as gunny bag factories and the paper mills).

Given these unfavourable conditions, it is not surprising that low productivity and the resultant high costs and selling prices which make their products uncompetitive characterize large segments of Thai industry. The only areas in which it has been demonstrated that Thai industry is capable of producing at competitive prices are those branches of industry based on local raw materials which do not require extensive processing or when the production is labour intensive and economy of production is not that important. Silk and silverware industries are examples of this latter type.

From those problems mentioned above, therefore, it is evident that industrial development has until the present been rather limited. It could be assumed that the rate of further industrial development will largely depend upon the government's ability to overcome three main problems:

1. Deficiencies in power, transportation and communications.

2. The insufficiency of domestic capital.
3. The shortage of skilled technicians, modern techniques of production and new equipment, and managerial personnel essential to profitable operation.

CHAPTER V

GENERAL RECOMMENDATION FOR THE ECONOMIC DEVELOPMENT OF THAILAND

Economic development is a complex process, in which various economic and noneconomic factors have to be closely interwoven in order to achieve its goals viz., increase in per capita income and high level of employment. This chapter attempts to give some general recommendation for the long-run economic development of Thailand. The recommendation will be made under these headings.

1. Development of infrastructure and social overhead capital.
2. Development in the agricultural sector.
3. Development in the industrial sector.
4. Recommendations for the financing of economic development.

1. Development of infrastructure and social overhead capital. One of the main obstacles to economic development of Thailand is the inadequacy of the infrastructure and social overhead capital. There are insufficient roads, rails, water and air transportation, power, and good education systems, etc. Development in the infrastructure and social capital overhead is the base needed, in other words it is a prerequisite for other sectors of the economy to begin their development. As Higgins said:

Economic development cannot take place without capital accumulation (i.e., investment in infrastructure and social capital overhead), the construction of irrigation systems, building dams, bridges, or factories, ships, and harbors--all the "produced means of further production" associated with high levels of productivity.¹

The government must, therefore, concentrate more on the infrastructure and social capital overhead projects. Moreover, investment in these projects involves a large amount of funds and the direct returns in the short run are rather small. Therefore, these investments are not attractive to private entrepreneurs. Yet development in every sector of the economy is required as a prerequisite of economic climate i.e., various basic facilities. The marginal social benefits are also much in excess of marginal private benefits,² so that it is apt for the government to undertake investment in these projects.

As a matter of fact, development in the infrastructure and social overhead capital in Thailand has received the largest amount of investment in both the First and Second Five Year Plans as illustrated in Table XIII.

¹Benjamin Higgins, Economic Development: Principles, Problems, and Policies (New York: W. W. Norton & Company, Inc., 1959), p. 204.

²Gerald M. Meier, Leading Issues in Development Economics (New York: Oxford University Press, 1964), p. 443.

TABLE XIII

DEVELOPMENT PLAN EXPENDITURES BY SECTOR
1961-1966 and 1967-1971

Millions of U. S. \$

	First Plan						Second Plan	
	(1)		(2)		(3)		(4)	
	1961-63		1964-66		1961-66		1961-67	
	\$M	%	\$M	%	\$M	%	\$M	%
Agriculture and Cooperatives	80	14	150	15	230	15	565	23
Industry and Mining	50	8	60	6	110	6	55	2
Power	120	20	90	9	205	13	145	6
Transport and Communications	160	27	350	34	510	32	665	27
Community facilities	85	15	190	18	270	17	520	21
Health	20	3	50	5	70	4	110	4
Education	35	6	40	9	125	8	250	10
Unallocated	40	7	40	4	80	5	190	7
Total	590	100	1,020	100	1,600	100	2,500	100

SOURCE: National Economic Development Board, National Economic Development Plan 1961-1966 and 1967-1971 (Report to The Committee of National Economic Development Board, Bangkok: National Economic Development Board, 1967), p.6.

Table XIII shows that the total amount of investment in the developing of infrastructure and social overhead capital (transport and communication, community facilities, health and education) accounts for 74 per cent and 68 per cent of total investment during the first plan (1961-66) and the second plan (1961-67) respectively (columns 3 and 4).

Transport and communications have received the biggest investment in both plans, 32 per cent and 27 per cent in the first and second plans respectively. The writer

agrees with this investment because transportation and communication in Thailand are still seriously underdeveloped. The lag of transportation and communications has led to regional inequalities and endangers the political security of the country.³

It is also interesting to note that the amount of investment in transportation and communications has been reduced from 32 per cent in the first plan to 27 per cent in the second plan, while at the same time investment in education has been increased from 8 per cent to 10 per cent. The writer supports this increased investment in education because human resources are the most important factor in economic development. If the citizens of a country lack education and training, new techniques, necessary for further advance of economic development, can not be introduced. As Meier said:

Economic growth does not only depend on the amount (or percentage) of investment. It depends on the character and abilities of the people, especially on their capacity to learn and apply improved methods of production, and on the numbers and qualities of their entrepreneurs.⁴

³There is evidence of communist infiltration along the frontier and in some remote areas which are far from the government's control due to the difficulty in transportation and communication.

⁴Meier, op. cit., p. 132.

Education and training will be the key to solving this problem.

It is also a fact that education systems, both primary and secondary, and higher education in the provinces outside the capital, still lag behind that within the capital. People from the provinces who want to learn will have to come to the capital. But the cost of this is prohibitive. Therefore, many able people have to drop out because they cannot afford it. The writer would like to recommend that the government should attempt to expand the educational system to outer provinces. In particular, the establishment of more primary and secondary schools should be undertaken in the rural areas in order to provide a good foundation education. Wider distribution of the benefits of education will provide greater opportunities for social advancement and more active participation in the nation's development efforts.

Although the short-run return from investment is indirectly productive, i.e., returns from investment infrastructure and social capital overhead are rather small and slow. Nevertheless they generate a better distribution of the benefits of development which will prove more beneficial to the overall economy in the long-run.

2. Development in the agricultural sector. Agriculture is the largest sector in the Thai economy absorbing

about 80 per cent of the labour force (see Table VII) and accounting for the greatest contribution to the GNP of Thailand (see Table X). It is, therefore, the backbone of the country's economy. Rice is the major crop of Thailand and at present earns more foreign exchange than any other export.

Agriculture received development funds second to transportation and communication in both development plans periods in Thailand (see Table XIII). Much remains to be done in agriculture, however, the following are general recommendations which will help to accelerate the rate of agricultural development in Thailand.

a) Transportation and dams which provide water supply or flood control are basic for agricultural development. The government should establish these facilities wherever they are necessary.

b) As discussed earlier, development in agriculture is hampered by the lack of a market to dispose of the products, especially in the field of cash crops. The government could help to develop markets by creating farmer's markets in various regions and providing transportation and storage facilities if it is necessary. In fact, the big markets in the country for agricultural products are in the sectors outside the agricultural sector, i.e., the industrial sector and tertiary sector which are

concentrated in the cities. Therefore, various farmers' markets should join with the central farmers' markets in the cities. Hence the demand and supply of products can be adjusted to match each other.

Another market for agricultural products is the export market. The export market has been a major source of foreign exchange in Thailand. Rice is in great demand in the export market, however, the government should help to find markets for some other cash crops such as maize, jute and cotton. Success in finding markets as outlets for these crops could bring forth an increase in farmers' income, for the farmer can grow these crops after the rice season is over.

The government should also analyse the demand and supply conditions in both local market and foreign markets so that farmers could plant crops in demand and avoid over-production in other areas. Farmers have a choice among rice, jute and cotton.

c) Increasing yields of agricultural production can be secured by new methods of production and the use of fertilizer and modern machinery. As written in the report by a UN group of experts:

It is clear from the recent experience of developed countries that agricultural productivity can be

considerably increased if a moderate effort is made to improve technique and increase capital.⁵

The best way to do this is via a community development program and demonstration farms. The government should use trained agriculturists to educate and train the farmers to use fertilizer and new techniques of production. The farmers will accept these new techniques and fertilizer only if they see that revenue from increased yields is in excess of the cost of fertilizer and the new methods of production. Therefore, demonstration farms could play an important role in securing acceptance of these innovations. To encourage the use of fertilizer the government may establish a fertilizer plant and sell fertilizer at a low price to the farmer. If fertilizer is better obtained by importing, the government should lower or remove the duty on this fertilizer in order that it could be sold more cheaply. To upgrade the rural agriculturist and the farmer, the government should establish more agricultural training schools in various regions where they are suitable.

d) One of the most important problems facing many farmers is the lack of financial resources. Some farmers

⁵United Nations, Problems of Long-Term Economic Projects: With Special Reference to Economic Planning in Asia and the Far East, Report of the third group of experts on programming techniques (New York: Economic Commission for Asia and the Far East, 1963), p. 30.

may want to enlarge their scale of production by clearing new land, buying machines, fertilizer or seeds, but may not be able to do so owing to lack of capital. The government should establish more credit institutions designed to solve these problems. Such institutions could be in the form of agricultural cooperatives, agricultural credit companies or agricultural banks. These institutions should provide easy terms with a low rate of interest to the farmers in order to encourage them to undertake investment in agricultural activities.

3. Development in the industrial sector. The Industrial sector will become more important for the Thai economy in the future, especially in view of the high rate of population growth that Thailand is facing now. The recommendations given here will be general and discussed very briefly due to the fact that they will be discussed in a later chapter.

The main emphasis of industrial development in Thailand should be along lines related with agriculture, in order to utilize the agricultural product as the raw material. On the other hand the agricultural sector also can utilize the industrial product such as fertilizer, various machines, and farm equipment that can be used in the agricultural process. Thus both sectors support each other.

Furthermore, emphasis should be placed on industry which will produce for import substitution rather than for export. It will be a great mistake if the government attempts to earn more foreign exchange by emphasising export industry. There are many countries which have started their industrialization long before Thailand. Therefore, these countries have more experience, more advanced techniques of production and higher productivity. Japan and Hong Kong are examples. It will be very difficult for Thai products to compete in the international market. The export industry should be encouraged only in fields that really have cost advantages or already have a reputation in the world market, such as Thai silk, etc.

The government should also provide cheap electric power and other essential services, including the training of the labour force. The government must analyse the demand for power, the kind of services, and the type of labour that will be needed in the process of industrial development in the future. This will avoid bottlenecks and help the development process go along on a smooth path.

4. Recommendations for financing economic development. Development according to the previous recommendations --infrastructure and social overhead capital, agriculture, industry--will certainly involve enormous amount of capital. The higher the rate of investment the country can afford,

the higher the rate of economic growth which will be achieved. The problem faced now is where to find the financial resources.

Financial resource for economic development may come from two major sources, i.e., domestic sources and external sources.

Domestic sources.

a) Voluntary savings. The major source of financial resources for economic development is voluntary savings in the country. However, in most underdeveloped countries including Thailand it is doubtful that a high enough level of domestic voluntary savings can serve the large amount of investment needed. It is recognized that voluntary savings in underdeveloped countries are rather low owing to low levels of income. Not only are voluntary savings low, but they have been used in unproductive and wasteful ways such as hoarding of gold, etc. The higher income group which has a higher ratio of income usually spends its income in luxury and conspicuous consumption, which Nurkse calls the "demonstration effect," i.e., it tries to emulate the standard of consumption in the advanced countries.⁶ Voluntary savings will aid growth significantly if the higher level income groups are entrepreneurs who usually reinvest

⁶Higgins, op. cit., p. 481.

their profits while seeking further profits. But it is a fact that in Thailand among the higher level income group there is a small group of landlords who are not likely to use their savings in more productive ways in the country.

Although the level of savings is low and some are unproductively used, the government must attempt to trap those savings and mobilize them into more productive uses. Voluntary savings even though they are low might well prove to be the critical margin in permitting a take-off.⁷

In order to encourage savings and mobilize them into proper channels, improvements in the financial institutions and securities markets, such as savings and insurance institutions, the creation of reliable specialized credit agencies, or banks, or cooperative, and so on, will have to be undertaken. The government may take some part of those savings to finance its projects by borrowing from the financial institutions or directly from its citizens by selling bonds, etc. Another way that the government can raise its funds is by taxation. However, in using taxation to raise revenue the government must be very careful about the effect of tax on the private economic activities. In general the tax must not discourage private investments in business which will contribute to economic development of

⁷ Ibid., p. 482.

the country. On the other hand the tax should be designed to encourage private investment in business which is considered to be necessary to the nation. Taxes should weigh heavily on that part of income which is used on unnecessary or luxury consumption, socially unproductive investment or foreign exchange hoarding. In financing the government's share in economic development, the government should compromise between the two alternatives above rather than stress one side.

Government borrowing from the private sector does not place as great a burden on the economy as borrowing abroad. However, the government still has an obligation to pay back the money including interest. In the process of returning the money the government may borrow again or may print more money. If the government has incurred a great amount of debt, its citizens may begin to distrust its ability to repay and thus contribute to instability in the economy.

The government can not rely on taxing alone, for generally low levels of income can not promise to increase the revenue of the government enough to finance all the government's projects. Therefore, the method of government finance must lie between the two alternatives of taxing and borrowing. How much the government should borrow and how much it should tax depends on the stage of economic development and the financial institutions and securities markets.

b) Forced savings or inflationary finance. The government may finance economic development by printing new money or by borrowing from the Central Bank. This process is inflationary finance, and when prices rise people will have to reduce the volume of physical consumption, thus creating forced savings⁸ equivalent to the total reduction. The government then can take this forced saving to finance economic development. Although this method is the easy way for the government to finance economic development, the writer would not recommend this method. A lesson can be learned from the past experience of some underdeveloped countries such as China, Argentina and Chile in which inflation occurred after the Second World War.

It may be true to a certain extent that moderate inflation may induce the producer to work harder to increase his money income, even though his real income level will not have increased. Furthermore, increases in money prices may induce the producer to increase output and sales, and the government may secure more revenues from income and business taxes. However, if inflation continues for any length of time, the stimulating effect will wear off rapidly.

Thailand should not attempt to launch its development by inflationary methods. Once inflation starts, it

⁸Higgins, op. cit., p. 463.

usually tends to become more and more serious and finally becomes hyperinflation. In underdeveloped countries, unlike developed countries, the output is more rigid, in other words the supply side is rather inelastic due to there being no excess capacity. Therefore, the expansion of output can not be made sufficient to meet the pressure of rising money demand.⁹ Underdeveloped countries are more prone to inflation than developed countries. Furthermore, it is more difficult to check inflation in underdeveloped countries because administrative and economic mechanisms required to check inflation such as financial institutions and securities markets are less developed.¹⁰ Financing by the inflationary method will result in less confidence in government money, difficulty in the balance of international trade, speculation and hoarding of land, gold, and foreign exchange, lack of domestic saving as well as foreign investment and more capital flight. There is an adverse effect on the people who receive fixed income. All the above are considered as obstacles to economic development. It is, therefore, recommended that the government should not attempt to use this method to finance economic development.

⁹United Nations, Methods of Financing Economic Development in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1949), p. 19.

¹⁰Ibid.

External sources.

It appears that in Thailand as well as in most other underdeveloped countries, domestic savings cannot provide enough funds to finance all the economic development projects. Therefore, capital from abroad is needed to supplement local capital. Foreign capital may take the form of foreign loans, foreign private investment and foreign aid, each of which will be discussed briefly below.

a) Foreign loans. Foreign loans are the major external source of underdeveloped countries for obtaining capital. Usually foreign loans take the form of contract between government and financial institutions such as the International Bank for Reconstruction and Development or the American Export-Import Bank, or government and government. It must be borne in mind that foreign loans are a burden on the borrowing nation. Therefore, in obtaining the loan, the government must take into account the country's current and future ability to repay such loans. Since interest on foreign loans is a fixed annual burden on the balance of payments, excessive foreign borrowing may be a serious handicap to the country. This is especially true in the case of Thailand which has only four major exports. If the world market for these exports is unfavourable in any year, a more serious burden on the balance of payments will result.

b) Foreign private investment. Foreign private investment may take the form of direct private investment in which managerial control goes along with the capital, and portfolio investment, in which the money is only lent without accompanying control of the enterprise. However, more of the first type is taking place at present. Private investments bring not only financial resources, i.e., foreign capital, but more importantly, new technology, industrial discipline, advanced management, and modern organization. Therefore, this is quite beneficial for underdeveloped countries where there is a lack of technology and managerial skill.

It has been evident that in the past, direct foreign private investment in many underdeveloped countries occurred in extractive industries in order to serve foreign markets rather than local markets. In other words, it goes into industries where the immediate and indirect employment impact is very low. The examples are investment in rubber plantations or investment in oil. The writer recommends that more encouragement be given to foreign investment in enterprises which will serve internal markets. Many products needed in the internal market can be produced in Thailand, thus creating import substitution. Although foreign investment is desirable in Thailand, care must be taken to obtain a balance between foreign capital and local

capital in order to avoid foreign domination and influence in the country's economy. The best solution is the joint venture enterprise in which equity is held by foreign investors and local investors. The government may grant special privileges to enterprises whose equity is held by large numbers of Thai citizens.

c) Foreign aid. Foreign aid is another source of finance. This kind of foreign capital does not pose any burden such as repayment or interest charges on the recipient country. Foreign aid has been given by international organizations and by rich nations for the purpose of helping countries which have been damaged by war. Another purpose is to stimulate economic development in underdeveloped countries. The aid comes sometimes in the form of helping in the construction of highways, dams, sanitation facilities, etc.

Foreign aid is the most beneficial kind of assistance that a country can receive since there is no burden associated with it. The government should not depend too much on financing its development projects from this source because the amount and future availability of aid depends on the donor countries. Foreign loans and foreign private investments also pose some burdens and problems if appropriate arrangements are not made to safeguard the interests of the receiving country. Therefore, internal resources and

voluntary savings should be the main source for financing economic development of the country. In Thailand, the government has financed economic development as recommended, i.e., more finances come from domestic than foreign sources as can be observed from Table XIV below.

TABLE XIV

SHARES OF DOMESTIC AND FOREIGN FINANCING OF
DEVELOPMENT PLAN EXPENDITURES DURING
FIRST PLAN AND SECOND PLAN

(Millions of U. S. \$)

	First Plan				Second Plan	
	First Period 1961-63		Second Period 1964-66		1967-71	
	Amount	%	Amount	%	Amount	%
<u>Domestic Resources</u>						
Central Government	275	47	545	54	1,500	60
Public Expenditures	75	13	75	7	250	10
Local Governments	35	5	70	7	150	6
Total	385	65	690	68	1,900	76
<u>Foreign Resources</u>						
Grants	95	16	80	8	175	7
Loans	110	19	250	24	425	17
Total	205	35	330	32	600	24
Grand Total	590	100	1,020	100	2,500	100

SOURCE: National Economic Development Board, National Economic Development Plan 1961-1966 and 1967-1971 (Report to the Committee of National Economic Development Board, 1967), p. 8.

It can be seen from Table XIV, that economic development in the First Plan 1961-66 was financed largely from domestic resources, 66.5 per cent against 33.5 per cent from foreign resources. Moreover, in the Second Plan, (1967-71) more finances will come from domestic resources, namely, 76 per cent against 24 per cent.

CHAPTER VI

MEASURES TO PROMOTE INDUSTRIAL DEVELOPMENT

In underdeveloped countries economic progress must involve industrial development. However, owing to limited factors of production such as suitable natural resources or capital funds, some form of government selection and assistance is necessary if manufacturing is to be developed to bring forth a greater national output. Some examples of government selection and assistance that might further this objective would be: tax and tariff incentives, promotion of cottage and small-scale industries and establishment of an industrial finance corporation.

This chapter attempts to spell out these measures that might help promote the process of industrial development. The analysis of these measures, especially on tax and tariff incentives, will be mainly theoretical. These measures will also be examined with reference to Thailand and a few other countries.

Tax and Tariff Incentives.

Incentive in this context may be defined as a reduction in, or exemption from tax or custom duty on the "favoured activity as against that currently imposed upon it. Incentive therefore constitutes necessarily an immediate

reduction in government revenue to be compensated by an expected expansion of the national economy and ultimately by a resulting increase in total tax revenue from such broadened economic basis."¹

Government intervention in the form of taxes and tariffs can influence an industry and certain factors of production in the country. A policy of incentives can be judged only by its impact in the broad context of economic development. Thus, the rationale of incentives, either tax or tariff type, is not only to foster production in an industry but to introduce a change in the industrial structure and thereby eventually transform the economic environment and raise the level of productivity as a whole.

Tax Incentives.

One of the most important instruments in industrial development policy is the tax system. Tax incentives may help to direct financial resources into manufacturing industry from other economic sectors, increase the efficiency of available production, and channel industrial investment into those branches of industry which are most likely to meet industrial development needs as a whole--rather than into sectors which have little or no development merit.

¹United Nations, The Effect of Taxation on Foreign Trade and Investment (New York: Department of Economic and Social Affairs, February, 1950), p. 17.

Thus, as stated by the UN Department of Economic and Social Affairs, the main purposes of a tax policy designed to encourage industrialization are:²

a) to bring about an increase in investment in both old and new industries and, conversely, to discourage speculative investments in unproductive activities, and

b) to increase the productivity of the various factors of production engaged in secondary industry.

The process of industrial development usually calls for a large volume of investment. These investments may take the form of machinery, equipment, buildings, raw materials, labour and so forth. Private entrepreneurs, owing to the risk involved, are frequently reluctant to undertake the needed investment, even if they are financially in a position to do so, especially in underdeveloped countries which are prone to political instability and which frequently have an unstable price system. However, government intervention in the form of tax concessions with the aim of offsetting deterring risks, becomes one of the possible ways to stimulate investment. This position rests upon the premise that these policies publicize, enhance and improve the country's investment climate for both domestic and foreign investors by indicating the favourable

²United Nations, Processes and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), p. 52.

disposition of the government toward private investment.³

A good example of one country which is using tax incentives very successfully in her industrialization is Puerto Rico.⁴

Thailand should be able to take advantage of this example in her industrial development. However, the various tax systems and their effect must be analysed in very great detail, because a system that is valid in one country may not be valid in another owing to different circumstances.

Heller and Kauffman wrote:

Thus, the adoption of tax incentives in one country on the grounds that these devices have been successful in another, without a thorough comparative analysis of the many and perhaps unique circumstances in which these incentives have operated, is probably misguided.⁵

Tax incentives operate on both income and property taxes. They may take the form of tax exemption, tax allowance on depreciation, and straight tax credit on reinvested profits.

1. Tax exemption. Exemption from a variety of taxes could be granted to selected taxpayers on a complete or partial basis. Since income tax is one of the heavy burdens

³Jack Heller and Kenneth M. Kauffman, Tax Incentive for Industry in Less Developed Countries (Chicago, Illinois: Commerce Clearing House, Inc., 1963), p. 4.

⁴Milton C. Taylor, Industrial Tax-Exemption in Puerto Rico (Madison: The University of Wisconsin Press), 1957.

⁵Heller and Kauffman, op. cit., p. 4.

of manufacturing enterprises, allowing for tax exemption should improve the prospects of commercial profitability and encourage private investment. It should serve, therefore, as a major instrument in attracting private capital and technology.⁶

Temporary tax exemption may conflict with the government's need of revenue, especially for those underdeveloped countries which derive a substantial part of their revenue from business income tax (and custom duties) rather than from personal income tax.⁷ This dilemma of the tax policy was stated by the UN Technical Assistance Administration:

It is apparent that tax policy faces a basic dilemma in its role as an instrument of capital formation for economic development. On one hand, high levels of taxation are necessary to finance the part of the developmental process which falls in the government sphere..... On the other hand, the lower the taxes the greater will be the inducement to private investors..

⁶Teodoro Moscoso, Address before the International Industrial Development Conference, San Francisco, October 17, 1957, cited by William H. Stead, Fomento-The Economic Development of Puerto Rico (Washington, D. C.: National Planning Association Pamphlet, 1958), p. 113.

⁷This situation is a common one because in many less developed countries the majority of workers are in agriculture, from which, due to low income and high illiteracy, it is not feasible for the government to draw significant taxes. This narrows the major source of tax harvest to the business community (and the professions).

..to take the risk associated with investment in industrial development.⁸

Tax exemptions are a means of increasing government revenue, because by attracting new investment, they help to build up industrial investment which will be taxable at a future date.

Tax exemption is an attraction to the investor in that it allows him to undertake investment which normally would be considered marginal.

Generally speaking, tax exemption should be based on these principles:

a) The adoption of income tax exemption should be closely related to the stage of industrial development. It should be allowed only in the initial stage of the industrialization process, owing to the fact that in the initial stage industrial profits are not at a normal level.

b) Tax exemption should be selective and limited. Tax exemption for new investment is a policy which has to be handled with care if it proposes to obtain the maximum benefit for a country; "it should be introduced only where it is quite certain to encourage investment that would not

⁸United Nations, Taxes and Fiscal Policy in Under-developed Countries (New York: Technical Assistance Administration, 1954), p.10.

otherwise take place."⁹ However, it should be allowed only to the development of new and necessary industries and industries whose development is of importance in the national interest. This could be measured by the contribution of the industrial firms to the economy as a whole. The purpose of this requirement is to make sure that tax exemption has been selective in the proper channel. The criteria for judging the value of a firm should be according to the levels of investment and employment.¹⁰ If the amount of investments of two industries considered for tax exemption are more or less the same, priority should be given to the firms which will employ a large labour force. The employment of local labour or local raw materials should also be taken into consideration.

Because the purpose of this tax exemption is to provide temporary fiscal encouragement to new investment and is not for a permanent subsidy, the length of exemption must be limited. The period of tax exemption usually varies from country to country and it also varies among different kinds of industries according to their importance and necessity. It should be noticed that too short an exemption

⁹Benjamin Higgins, Economic Development: Problems, Principles and Policies (New York: W. W. Norton & Company, Inc., 1959), p. 515.

¹⁰Taylor, op. cit., p. 105

period may not be so attractive to industries whose profitability is very low in their initial years. In general, the practical period ranges from five to ten years which is the time required by most industries to reach a good earning level.

The problem facing most countries is to determine the starting date of the tax exemption status in order to maximize the benefit of both sides, the new enterprise and the government. In Thailand, for example, tax exemption is allowed for five years beginning with the first year when sales and income are recorded. The industries which are entitled to tax exemption are specifically enumerated in the Promotion of Industrial Investment Act of 1962.¹¹

In Peru, exemptions for periods of three, five, ten and fifteen years all begin with the regular functioning of the plant.

In Israel, tax exemptions are arranged to commence on that date when the enterprise first earns a net profit.

In Jamaica under the Jamaican Industrial Incentives Law of 1956 the practice is different in that the entrepreneur has a choice of two methods of exemption. The first method of exemption lasts seven years starting from the date of production. The second method is a four year exemption

¹¹See Appendix C.

period from a date chosen by the entrepreneur which is not more than three years from the time the plant first went into production.

We have seen that the commencement date of tax exemption has varied in different countries. The writer would like to recommend that the tax exemption period should start from the date the project is approved for exemption. This will maximize incentives to get the plant operative as quickly as possible in order to maximize the operation during the period in which the tax exemption can be enjoyed. One important thing should be borne in mind. In an under-developed country, the need for infrastructure and social overhead capital is severe. The government is solely responsible for the creation of social overhead capital and infrastructure. The major source of revenue to the government is from business taxation rather than income tax. Therefore, the sooner the exempt firms start their operation with the early validity of the effective date of exemption the sooner the government will receive income from those firms.

The case for the tax exemption date starting from the first year the firm gains a net profit can be criticized by the fact that the firm may delay operations or work below full capacity in an initial slack year in an attempt to make no profit during this year. When the prosperous year comes

the firm will operate with full capacity in order to make profit as high as possible and this profit will be subject to tax exemption. The government will not be able to receive the revenue as soon as desired.

c) Tax exemption should be considered as part of a comprehensive program. Tax exemptions are not the only device to stimulate the growth of industrial development. Therefore, they should be harmonized to various projects in the comprehensive program of industrial development, in order to prevent any conflict among projects and among incentive devices.

d) Tax exemption should be as automatic as possible. In most of the underdeveloped countries there are acute shortages of skilled technical personnel. If tax exemptions are to be used more effectively, "a more automatically operating statutory pattern is more appropriate."¹² In order to restrict bias on the part of government officials to a minimum, it is therefore imperative that the terms of eligibility be precisely defined.¹³

In addition to tax exemption, the normal tax on business profits should not be too high. Too high a normal

¹²Heller and Kauffman, op. cit., p. 9.

¹³Murray D. Bryce, Policy and Methods for Industrial Development (New York: McGraw-Hill Book Company, Inc., 1965), p. 214.

tax reduces the profits and may permit too little margin to be able to attract investment. On the other hand, a temporary period of exemption will not sufficiently compensate the entrepreneurs for the risks involved.

It is very difficult to say what level of taxation becomes a serious barrier to industrial investment as it involves a variety of other factors such as economic climate and infrastructure, condition of demand and supply, and so forth. However, it is obvious that any significant level of taxation on profit has some negative effect on investments. It has been argued that any level of taxation higher than 30 per cent is likely to be a hindrance to investment.¹⁴ (In Thailand such taxes range from 15 to 25 per cent.)¹⁵ High tax rates not only discourage investment from local entrepreneurs, but they also discourage foreign investment, which is detrimental to underdeveloped countries where capital is so badly needed.

Export taxes are frequently levied by underdeveloped countries as a revenue device but without adequate

¹⁴This percentage is based on the mean average of corporation income tax rates of various countries. Calculated from data in Expanding Private Investment for Free World Economic Growth (Washington: United States Government), 1959.

¹⁵See Appendix D.

consideration of their effect on industrial investment. It is generally believed that such tax would be paid by the foreign purchaser of the exports but this is possible only when the country has a great economic advantage in producing export goods which have an inelastic demand in the world market. In most cases, due to the fluctuation of the prices in the world market, the underdeveloped country, after imposing a tax on exports, has to pass the burden to the producer at home at a cost which eventually reduces the profit margin of his operation. It can be seen that while sometimes tariff protection is the traditional way to help infant industries for the domestic market, it is of no help to export industries. Thus exemption tax on exports could help to increase the volume of exports and encourage more investment in export industries.

Judging from the above argument, income tax exemption seems to be the wise incentive which is appropriate for export industries; and it is equally well suited for meeting the requirements of domestic industries. Therefore, there is considerable evidence that tax exemption is one of the most important factors influencing firms which do decide to invest.

2. Tax allowance achieved by permitting accelerated depreciation. This form of tax incentive is only given to the investments of approved industries. It changes the

normal time basis of depreciation deduction which formerly was permitted on fixed capital. The concession allows fixed capital to be written-off earlier than would otherwise be possible, and charged as an expense to reduce taxable net income and conserve capital in the crucial early years.

However, over the number of years, the total amount of tax paid will be the same, since the tax will be increased when the depreciation allowance is reduced.¹⁶ This is because the total amount of depreciation will be the same either under the concession of accelerated depreciation in the early year or at the normal rate. Therefore, it is only equivalent to the postponement of the tax liability. But it still benefits the investor in the sense that he can use the interest-free loan¹⁷ equal to the amount of the tax differential in the initial period.

In this way, high-priority projects can be accorded the privilege of accelerated depreciation, while low priority projects can be required to extend depreciation over a longer period of time. The higher the profit return and the quicker an investment is written off, the sooner a

¹⁶This assumes a flat or uniform, rather than progressive, corporate tax rate, and would be only approximately true where a progressive tax prevails.

¹⁷Heller and Kauffman, op. cit., p. 156.

firm or industry assumes liability for regular tax payment. Although tax allowance on accelerated depreciation is only a postponement of tax payment, it enables the investor to shift the burden of tax from the difficult early years to later years of sounder financial position.

Israel is an example of a country which uses depreciation allowances in order to stimulate investment. New companies in Israel are allowed to depreciate their capital equipment at double the normal rate. This high rate of amortization allows for the write-off of 70 per cent of such equipment in four years and the entire write-off of this equipment in 7 years.

3. Straight tax credit on reinvested profits. Generally speaking, taxes will always be a heavy burden on an industrial enterprise--taxes reduce the profits of the enterprise. A tax exemption on the part of profits that will be reinvested can increase the entrepreneur's capital fund. Thus, such a measure helps to increase investment and the growth of industrial development. As noted by the United Nations Department of Economic and Social Affairs:

Industrial development may be stimulated by means of tax concessions on reinvested profits in the form of either an exemption from income tax on the amount ploughed back or a reduction in the tax rate or the tax base.¹⁸

¹⁸United Nations, Processes and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), p. 53.

The rate of tax reduction on reinvested profits could be varied according to priorities of the project or the state policy. These allowances are generally tied to the acquisition of selected assets in the year of acquisition. An important characteristic of these reinvestment allowances is the way in which the allowances are limited. For example, in Taiwan reinvestment allowances are 25 per cent of the taxpayers' income in the taxable year in which he acquires the asset qualifying for this allowance. In Argentina, however, the allowance percentage varies and it is dependent upon the priority of projects. Some countries have taken a broader approach toward the percentage of allowances permitted. An example of this broader approach is Peru where taxpayers engaged in the manufacture of necessary articles are allowed to take a specified percentage of their profit and set it aside in a reinvestment fund or reserve. This reserve must be channeled into investment within three years or else it will be returned to taxable income for the year in which it was earned.

The policy of tax credit on current income for reinvestment should be more effective in Thailand as well as other underdeveloped countries when compared to developed countries. The reason is the absence of a well organized capital market and the lack of capital which tends to make

it more difficult for the entrepreneur to have access to the funds for his investment.

The above arguments regarding various measures of tax concessions seem to suggest that taxation affects industrial development through its impact on the level of investment. High tax rates tend to discourage investment. Higher corporate taxes would reduce the profit margin which could discourage the entrepreneurs from taking risk in further investment. A higher tax on export goods generally reduces the producer's incentive by forcing him to bear the burden of such tax unless the country possesses a greater comparative advantage in the production of the export goods.

To encourage investment in Thailand, the present taxes imposed on profits are attractively low. The rates range from 15 to 25 per cent--which are considered relatively low when compared to some other countries such as Sierra Leone, Ghana and Nigeria, where the rate is 45 per cent.¹⁹ Furthermore, the Investment Act of 1962 provides special tax arrangements for both local and foreign investors.²⁰ This should help to create a more favourable climate for investment. However, it must be recognized that the tax incentive

¹⁹ John F. Due, Taxation and Economic Development in Tropical Africa (Cambridge, Massachusetts: The M. I. T. Press, 1963), p. 48. See also Appendix E.

²⁰ See Appendix C.

alone will not be such an effective incentive if the country has not been able to offer other inducements such as low-cost labour, social overhead capital, good government, stable currency and so forth.

Some Comparisons of Tax Incentive Techniques Used in Various Countries.

Among various kinds of tax incentives and tariff incentives, income tax exemption has been used widely and successfully in many developing countries. Puerto Rico is a good example of a country which uses a tax exemption program very successfully in her industrial development. This section attempts to analyse the tax exemption programs in Puerto Rico and Thailand, in order to find out how successful they were in both countries.

The efforts to develop industry have long been made in Puerto Rico and an industrial tax exemption statute had been enacted as early as 1919, and was succeeded by various revisions.²¹ However, the act of tax exemption on a broad and comprehensive scale was commenced in 1947 and finally was replaced by a new act in 1954. This act provides relief from property and license taxes, as well as a ten year income tax exemption for each grantee. Exemption from

²¹ Taylor, op. cit., p. 8.

payment of property taxes, however, is dependent on the amount of investment. If investment is below U. S. \$ 1 million the exemption from property tax is for five years; it increases gradually to the full ten years when investment exceeds U. S. \$ 10 million. Under this law dividends are exempt for the first seven years of operation if paid within fifteen years of the date of establishment. The act of 1954 also includes a provision for existing firms, if they are among the designated industries that are eligible.

The existing firms in the list of designated industries may receive tax exemption as soon as the first new eligible firm begins to operate.²²

The main purpose of the tax exemption in Puerto Rico is to attract investment in industry from mainland U. S. A. This tax exemption law is under the sponsorship of PRIDCO (Puerto Rico Industrial Development Company). Under the Industrial Aid Program PRIDCO also undertook the building of factories which were later made available under liberal terms for purchase, lease, or lease with option to buy, and it also developed other services for new enterprises.

General characteristics of the Tax Exemption Act.

In order to understand and get some idea of the tax exemption in both countries it is required to know the

²²Ibid., p. 22.

characteristic of the Tax Exemption Acts.

In Puerto Rico, the Industrial Tax Exemption Act provides exemption from three major tax levies.

A. Income tax exemptions that include the following:

1. Individual, corporate, or partnership income.
2. Dividend or profit distribution made to residents of Puerto Rico, and to those nonresidents that are not taxable elsewhere on the same income.
3. Income received from the lease of real property that is used by an exempt firm.

B. There is a property tax exemption that covers both the municipal and the central government levies and includes:

1. Property employed in the development, organization, construction, establishment, and operation of an exempt business.

2. Real property leased to an exempt firm.

C. The exemption that applies to all municipal levies, such as license fees and excises.

These three fields of exemption have been considered as a very good subsidy to the entrepreneur willing to invest in Puerto Rico, and it is likely to promise a good return from investment behind the subsidy.

Broadly speaking, in the whole pattern of exempt

taxes, the income-tax-exemption predominates as the single most dominant advantage for a grantee.

A point will now be raised concerning number (2) of section A, i.e., dividend or profit distribution made to residents of Puerto Rico, and to those nonresidents that are not taxable elsewhere on the same income. It is clear that the dividend paid to the residents of Puerto Rico will receive the full amount of the tax exemption, but the dividend paid to a non-resident will have full exemption only if the dividend income will not be taxed under income tax of the recipient country. If it is taxed in the recipient country, the income received by a non-resident from a dividend will be subject to a Puerto Rico dividend tax which amounts to 30 per cent if it is a corporate dividend and 20 per cent if it is a dividend of an unincorporated firm. This tax is justified by the fact that the Puerto Rican Government does not wish to forego tax revenue which will be taxed anyway in a foreign country. The Puerto Rican Government does not feel it fair that income generated in its country should be subject to a tax in a foreign country.

The exempt tax structure of Thailand is rather narrow when compared with that of Puerto Rico. Tax exemption is only allowed on income tax, in other words, tax exemption is allowed directly on profit only, as can be seen in the following quotation:

A new promoted industry (not applicable to expansion of an existing industry) will be exempt from income taxes for a period of five years beginning with the first year when sales or income are recorded.²³

There is no tax exemption on dividends, on property or on any municipal levies, such as license fees and excises.

The achievements of the tax exemption programs in Puerto Rico and in Thailand. The basic objective of tax exemption program in Puerto Rico or in Thailand is the same as elsewhere, i.e., aiming to encourage investment in industry with a view to increasing national income and per capita income. It is recognized that tax exemption in Puerto Rico has been a very successful program and it has brought forth an increase of national economic growth and employment. In order to assess the successfulness of tax exemption it is desirable to analyse the change in the rate of gross domestic growth during the period covered by tax-exemption. Moreover, it is also desirable to compare the growth rate of the manufacturing sector with that of some other sectors. The final step is to analyse the growth in the exempt sector alone. The analysis of the growth in this sector is based on the available data and material which, at this time, is available in one country but not available in the other. This problem shows the difficulty in comparing the same thing in the same period. Therefore, in some cases

²³See Appendix C.

the analysis can be done only in one country if the data in another country is not available. However, the writer will try to give a judgment of the analysis as closely as possible for these two countries.

TABLE XV
INDUSTRIAL ORIGIN OF GROSS DOMESTIC PRODUCT

Year	GDP	Agriculture		Manufacturing		
		<u>Puerto Rico (Million Dollar)</u>				
		%		%		
1947(1)	626.6*	100.0	149.8	100.0	77.9	100.0
1951(1)	909.6	145.1	176.4	117.7	107.5	137.9
1953(2)	892.6	100.0	171.6	100.0	166.7	100.0
1963(2)	2,359.7	264.3	210.5	122.6	521.6	312.8
		<u>Thailand (Million Baht)</u>				
1955(2)	39,488	100.00	16,568	100.00	4,647	100.0
1963(2)	67,650	171.4	23,722	143.1	7,938	170.8

NOTE: * Data are NDP (GDP are not available)

SOURCES: (1) United Nations, Statistics of National Income and Expenditure, (New York: Statistical Office, 1954), p. 43.

(2) United Nations, Yearbook of National Accounts Statistics (New York: Department of Economic and Social Affairs, 1965), p. 356.

Analysis of gross domestic, agriculture and manufacturing growth. Table XV shows that, in Puerto Rico, during 1947 to 1951 net national product increased by 45.1 per cent, agriculture increased by 17.7 per cent; at the same time manufacturing increased 37.9 per cent, which is equal

to 9.4 per cent of average increase per year. During 1953-1963, gross national product increased by 64.3 per cent, agricultural products increased by 22.6 per cent and manufacturing increased by 212.8 per cent or at the average of 21.2 per cent per year over a period of ten years.

The data above indicates that manufacturing has been increasing its share of national product because its rate of increase is outstripping some of the other sectors. The average rate of increase in manufacturing in the first period is slower than the second period owing to the first returns from this new promotional approach, which were not very impressive either quantitatively or qualitatively. Only 10 new factories were established during 1947/48, and 106 more during 1949 to 1951. Moreover, most of these firms were small and labour-oriented. The second period began after 1951, when more new firms using capital intensive were established. By the middle of 1954, the total of newly established factories, through the efforts of the industrial development program, was 374 factories. All together from 1947 to 1948, 554 new factories have been established, and they operated under tax exempt status.²⁴

²⁴William H. Stead, Fomento-The Economic Development of Puerto Rico (Washington: National Planning Association, 1958), p. 75.

For Thailand, Table XV shows that between 1955-1963 gross domestic product increased by 17.4 per cent, agricultural product increased by 43.1 per cent, manufacturing product increased by 70.8 per cent or 8.8 per cent of the average increase over the period of 8 years.

The data shows that the growth rates of the manufacturing sector in both countries are higher than in the agricultural sector, however, the average growth rate of manufacture in Puerto Rico is still higher than in Thailand. The increase in gross national product of both countries was the result of the increase in the productivity of various sectors of the economy especially in the industrial sector which follows a shift in output and employment from the low productivity sector (agriculture) to the higher productivity sector (industry).

Analysis of the exempt sector. The data discussed previously shows that manufacturing has increased its share in national income. However, the income generated by the manufacturing sector arises from both tax-exempt and non-tax-exempt enterprise. In order to say that tax exemption is an effective instrument in promoting manufacturing, it is required to analyse the result of income and employment generated under the exempt activities. Owing to the lack of data concerning income generated by the tax exemption firms, the only way to estimate this is by using the amount

of total investment by these firms and the incremental capital output ratio. The incremental capital output ratio in manufacturing is estimated to be 3:1 which is most likely what it is in most underdeveloped countries.²⁵

TABLE XVI

INCOME GENERATING EFFECTS OF INVESTMENT IN
EXEMPT ACTIVITIES

	Investment	Income Increase	Per capita Income Increase*3	Annual Average Per capita Income
	(\$ m.)	(\$m.)	(\$)	(\$)
	(1)	(2)	(3)	(4)
Puerto Rico	340*1	113.33	49.29	5.47
Thailand	147*2	49.00	1.55	0.22

NOTE: *1 The estimate of total investment in tax exempt firms between 1949-1958, (9 years), from National Tax Journal, Vol. XIII, No. 1, March 1960, p. 343.

*2 The estimate of total investment in tax exempt firms between 1959-1966 (7 years), from Table IV.

*3 Total population in Puerto Rico at the end of 1958 was 2,299,000, in Thailand at the end of 1966 was 31,508,000,--from National Demographic.

In Table XVI, the figures in Column (1) represent the aggregate investment by exempt industries over a period of nine years in Puerto Rico from 1949-1958, and a period of seven years in Thailand from 1959-1966. Column (2) is

²⁵Benjamin Higgins, Economic Development: Problems, Principles and Policies (New York: W. W. Norton & Company, Inc., 1959), p. 646.

TABLE XVII

INVESTMENT UNDER TAX EXEMPTION PROMOTION

	1959	1960	1961	1962	1963	1964	Total
Total Amount of Firms	23	40	41	48	66	63	281
-Thai Investment	9	18	24	17	23	18	109
-Foreign Investment	2	2	1	3	5	2	15
-Joint Venture	12	20	16	28	38	43	157
No. Investment Group A	1	2	2	9	21	15	50
No. Investment Group B	-	3	1	10	3	6	23
No. Investment Group C	22	35	38	29	42	42	208
Capital	212,400	427,175	237,458	380,020	529,152	509,130	2,295,335
No. Thai Employees	3,937	12,407	5,110	6,340	10,861	10,158	48,813

SOURCE: The Agency for International Development, Private Enterprise Investment Opportunities in Thailand (Bangkok: United States Operations Mission to Thailand, 1964), p. 34.

TABLE XVIII

DETAILS OF DOMESTIC & FOREIGN REGISTERED CAPITAL
(ESTABLISHMENTS WHOSE AGREEMENTS HAVE ALREADY
BEEN CONCLUDED AND PROMOTION CERTIFICATES
RECEIVED), 1959 - 1966

Serial Number (1)	Nationality (2)	100% Thai or Foreign Establishments (3)		Joint-Venture Establishments (4)		Total (5)	
		Registered capital (Baht)	per centage %	Registered capital (Baht)	per centage %	Registered capital (Baht)	per centage %
1	Thailand	927,206,243	86.66	1,025,724,467	54.90	1,952,930,710	66.50
2	Japan	119,930,000	11.20	291,925,000	15.62	411,855,000	14.01
3	China	-	-	172,020,608	9.20	172,020,608	5.84
4	U. S. A.	10,000,000	0.93	123,456,091	6.60	133,456,091	4.54
5	England	1,000,000	0.09	27,943,250	1.50	28,943,250	1.00
6	Federation of Germany	-	-	25,828,000	1.38	25,828,000	0.87
7	Malaysia	-	-	26,753,334	1.43	26,753,334	0.91
8	Denmark	-	-	22,494,000	1.20	22,494,000	0.76
9	India	12,000,000	1.12	4,083,850	0.22	16,083,850	0.54
10	Australia	-	-	14,599,750	0.78	14,599,750	0.50
11	Italy	-	-	11,727,000	0.62	11,727,000	0.39
12	Switzerland	-	-	9,578,400	0.51	9,578,400	0.32
13	Israel	-	-	7,000,000	0.37	7,000,000	0.23
14	Portugal	-	-	6,341,000	0.34	6,341,000	0.21
15	Holland	-	-	6,247,750	0.33	6,247,750	0.21
16	Indonesia	-	-	6,000,000	0.32	6,000,000	0.20
17	Hong Kong	-	-	4,749,500	0.25	4,749,500	0.16
18	Burma	-	-	3,750,000	0.20	3,750,000	0.12
19	Argentina	-	-	3,000,000	0.16	3,000,000	0.10
20	Philippines	-	-	850,000	0.04	850,000	0.03
21	Austria	-	-	100,000	-	100,000	-
22	Other Nationality	-	-	75,377,000	4.03	75,377,000	2.56
Total		1,070,136,243	100	1,869,549,000	100	2,939,685,243	100

NOTE: 3rd column showing registered capital of the partnership or company in which share holders are of the same nationality.

4th column showing registered capital held by Thai or foreign nationals whose capital are registered together as a company or partnership excluding joint ventures.

Sources: Board of Investment of Thailand, Research and Statistics Division, Bangkok, 1966.

the aggregate rise in annual income calculated from the incremental capital output ratio of 3:1. Column (3) is per capita income calculated by dividing income by total population. Column (4) represents the average increase in per capita income.

From Table XVI, it can be concluded that tax exemption program in Puerto Rico is more successful than the one in Thailand, for it has generated a substantial increase in per capita income up to U. S. \$ 49.29 with the average increase of U. S. \$ 5.47 per year. Although the result of tax exemption program in Thailand helped to increase per capita income, it was rather small when compared to Puerto Rico, in other words it has not been contributing as much to national income as is the case in Puerto Rico. The gain in terms of income generated by the exempt program depends on the total amount of investment that was attracted by the program of tax exemptions. The wide range of differences in the results of both countries is caused by the wide difference in total investment undertaken in those two countries. Investment undertaken in Puerto Rico over a 9 year period was U. S. \$ 340 million while in Thailand it was U. S. \$ 147 million over a 4 year period.

The rationale behind the wide difference in attracting investment by the tax exemption program can be justified by the fact that:

1. Puerto Rico has a unique economic background of advantage in that it has a very close economic tie with the United States; "Puerto Rico is the only area in the world that has the singular advantage of being within the tariff area of the mainland United States but not subject to federal taxes."²⁶

2. Puerto Rico is close to the United States which is the world's biggest capital export country, and with the free movement of people, goods and money between both of them, therefore, it is easier for Puerto Rico to attract investment from mainland U. S. A. Also a larger percentage of total investment in Puerto Rico belongs to the people from United States rather than the local people.

3. The tax exemption program in Puerto Rico is more comprehensive and broader than in Thailand in the sense that it offers greater subsidies to the entrepreneurs. For example, the exemption in Puerto Rico allows for the existing firms of favoured industries but in Thailand it is only allowed for the new designated industries. It is not applicable to expansion of an existing industry. The period of tax exemption offered is also longer than in Thailand:

²⁶Taylor, op. cit., p. 5. :-"The fact that federal taxes are not levied in Puerto Rico may be rationalized on the principal of no taxation without representation; Puerto Ricans are American citizens but are represented in congress only by a Resident Commissioner, who has no vote."

it is 10 years in Puerto Rico and it is only 5 years in Thailand. The longer the period of tax exemption offered to the entrepreneur, the more benefit they will receive in the form of profit return. Profit is a major factor in determining the investment decision.

Another important factor that the new firms under tax exemption generated was an increase in employment as a result of new investments which were undertaken. Unemployment and disguised unemployment have always been the big problem for most underdeveloped countries. The increase in manufacturing investment not only brings forth an increase in employment in both countries but also results in rising productivity. In Puerto Rico the total employment generated by the tax exempt firms is estimated to be about 35,000 workers at the end of 1958, which was about 44 per cent of manufacturing employment and 6.3 per cent of total employment, while in Thailand employment generated under the tax exemption program at the end of 1964 was 48,813 workers²⁷ (see Table XVII).

In appraising the tax exemption programs it is also appropriate to analyse the structure of the exempt industries

²⁷Owing to the lack of data on employment in manufacturing and total employment in the whole country, employment in the exempt sector can not be calculated as a percentage of employment in the manufacturing sector and as a percentage increase of total employment.

both in terms of ownership and nature of the firm. It has been observed that the majority of investment attracted by the exemption program came from mainland U. S. A. in the form of direct investment rather than loans to Puerto Ricans. It is the main purpose of the exempt program in Puerto Rico to draw capital from the mainland as much as possible in order to industrialize her economy. Puerto Rico, with the limited amount of land and the increasing pressure of population, needs industrialization very badly. Among the Puerto Ricans, who are mostly engaged in agriculture and commerce, there is a lack of industrial knowledge, moreover, capital resources in Puerto Rico are limited due to low average per capita income. Therefore the success of industrialization depends on the ability of the government to attract mainland entrepreneurs, with their capital, technological skills, and market connections.²⁸

The second facet of the structure of industries under the exemption program in Puerto Rico is the nature of the firm in the export industries. Most of the products are sold in mainland U. S. A. Therefore, it can be justified that the tax exemption program has a substantial influence in changing the structure of the Puerto Rican economy from one which is agriculturally orientated to one that is

²⁸Taylor, op. cit., p. 134.

industrial raw materials export oriented. The result of this is to make the Puerto Rican economy sensitive to industrial fluctuation in U. S. A. in the future.

As for Thailand, more than 50 per cent (66.5%) of total investment, under the promotion of tax exemption between 1959-1966, belongs to the Thai citizen (see Table XVIII, Column 5). The rest of this is investment from various nations, of which Japan has the biggest percentage (14.01%) among them. It is the writer's recommendation that, the promotion program in Thailand should put more concentration on drawing capital resources from the local people rather than from foreign countries. The rationale of this argument is as follows:

1. Thailand is a predominantly agricultural country in which agricultural products still can be increased by the introduction of modern techniques of cultivation, irrigation, fertilization, etc. The population to land ratio is not severely high, and in any case industrialization is not as urgently needed (refer to Chapter III, p.87)

2. Savings in Thailand are not that low in comparison to some other underdeveloped countries as can be seen in Table XIX which shows the most recent data yet published. However, these savings have not been drawn out to be effectively used, for most of savings were kept in the form of unproductive capital such as gold, jewels, land

speculation, etc. Moreover, the higher income group is prone to spend part of their income in conspicuous consumption, whereas they should be saving more. If the government tries to educate or persuade the people to save and to invest their savings in a productive way, it can be expected that the capital fund for investment in industry from the local people can be increased, and less capital will be needed from foreign countries.

3. Too much foreign investment in the country may lead to the loss of political and economy policy will be under the control of the capital owner country which often leads to hesitation when laws are passed or particular cases are examined. Any countries in this world should have the right to run their own policy and also it is the pride of the country. Although Puerto Rico has been successful in using the exempt program in various respects, such as increase in per capita income and employment, there is little evidence that local investors have played a large role. In Thailand, even though the success is less, the local investors have been more involved in using domestic capital in order to promote the economic growth of the nation. Furthermore, the country will face the problem of capital outflow when foreign companies send the profits or repatriate to their homeland. This case will cause the pressure on balance of payment of the country.

4. It is remarkable that most of the investment in Puerto Rico comes from mainland U. S. A.; however, Puerto Rico and U. S. A. are still under the same country. But for Thailand if any foreign investments exist, this means that they come from other countries which finally will pose the problem as in number three above.

TABLE XIX²⁹

DOMESTIC NET SAVINGS IN ECAFE COUNTRIES
(PER CENT OF GNP)

	Year	Domestic Net Saving		
		Total	Government	Private
Burma	1960	10	4	5
Ceylon	1960	4	2	2
Taiwan	1960	13	7	6
Fed. of Malaya	1959	13	5	8
India	1959	11	1	10
Japan	1960	29	8	20
Korea, South	1960	6	4	2
Pakistan	1960	2	0	2
Philippines	1960	4	2	2
Thailand	1960	13	2	11

SOURCE: United Nations, Yearbook of National Accounts Statistics (New York: Department of Economic and Social Affairs, 1961).

²⁹United Nations, Problems of Long-term Economic Projections: With Special Reference to Economic Planning in Asia and the Far East. Report of the third group of experts on programming techniques (New York: Economic Commission for Asia and the Far East, 1963), p. 63.

The second facet of the industrial structure under the exemption program in Thailand, also different from Puerto Rico, for Thailand industries is not export industry but the main purpose is for import substitution. Most of the products are sold in the Thai market. It would be more difficult for Thailand to put the main purpose of industrial program into export industry like Puerto Rico. Puerto Rico exports the products to U. S. A. in which there is no tariff and any barrier. For Thailand unlike Puerto Rico her exports have to sell in other countries in which there are tariffs and various barriers. Moreover, in that part of the world Japan is the most advanced industrialized country and has been marketing her products in all those areas, therefore, the competition is rather high and there is very little chance for Thailand to compete with Japan.

It is noticeable from Table XVII that most of the investment under the exempt program in Thailand falls into Group C which has the lowest priority in the Act, in other words, industries which have less necessary and less significant contribution to the economy of Thailand. Therefore, it indicates that the program of tax exemption has not been following the direction desired. If these investments were to be in Group A and Group B, then more would be contributed to the economic development of Thailand could be expected.

General Recommendation For The Tax Exemption in Thailand.

The previous discussion shows that the tax exemption program operated in Puerto Rico has contributed a great deal to the increase in national income and in employment. In Thailand, even though the program has contributed to an increase in national income and employment, the rate of increase is rather low when compared to Puerto Rico. Some brief recommendation can be given here to promote the tax exemption program in Thailand in order to achieve the maximum purpose, i.e., increase national income and employment via the increment of investment.

1. Tax exemption should be measured from the date the project is approved for the period of five years.
2. Dividends paid during the exempt period should be subject to the dividend tax, coupled with a tax allowance on profit reinvested, for this will encourage more reinvestment.
3. Tax exemption in Thailand should cover the desirable industries that are already existing but that want to expand their operation.
4. The tax exemption program should try to avoid the creation of monopoly unless the production of one firm is sufficient for the demand. At the same time it should not encourage firms that produce the same product in which the

product may overwhelm the market demand, and lead the firms to produce at lower than full capacity which will cause economic waste.

5. In case the new firms are engaged in assembling, which is the new thing in Thailand and mostly belongs to foreign companies, tax exemption should only allow exemption to firms that will produce a substantial increase in the value of the products, which are likely to be in the form of labour and raw material. The value added should be at least 25 per cent of the total cost.³⁰

Tariff Incentives.

Besides tax incentives, tariff incentives also have a significant effect on the promotion of industrial development if properly arranged. It is widely used in most countries which are seeking to industrialize. Tariff incentives could be considered in two different contexts. One is tariff exemption on capital goods imported; a second one is tariff protection for home industries.

1. Tariff exemption on capital goods imported. It is true that most of the underdeveloped countries have a shortage of capital goods--machinery and tools, equipment, locomotives, power plants and other installations that are

³⁰ Taylor, op. cit., p. 53.

required for industrial development.³¹ And they must be imported from the more 'advanced' countries. Therefore if a government has a special tariff exemption for the investors, it should be able to encourage more imports of capital goods in order to stimulate industrial growth in the country.

Tariffs constitute an important part of revenue to the government in most underdeveloped countries. However, a temporary loss of revenue from tariff exemptions on capital goods could be more than offset by the tax revenue after the industries have developed and become taxable. Therefore, if a country wishes to encourage private industrial development, it should not discourage or limit such investment by imposing a tariff on capital goods. However, tariff exemptions on these goods should be simple³² in order to maximize the attainment of the objective; namely, that the country wishes to import as much industrial equipment as possible and will not increase the cost to private investors unnecessarily, in order to maintain incentive in industrial development.

³¹United Nations, "Population Growth and the Standard of Living in Underdeveloped Countries," United Nations population Division, Bernard Okun and Richard W. Richardson (ed.), Studies in Economic Development (New York: Holt, Rinehart & Winston, Inc., 1962), p. 247.

³²Simple in this context means: (a) simple in avoiding complicated classifications of different types of capital goods according to some priority need; (b) simple in avoiding unnecessary complication and "red tape" on the part of the intended importer of needed capital goods.

In Thailand tariff exemption is allowed to promoted industries on import of machinery, parts, components and accessory equipment required or on raw materials which are not produced locally.

In Ecuador, in 1964 the government passed the Industrial Development Act which was designed to promote incentive for private investment. By this Act favoured industries were allowed full or partial exemptions from import duties on new machinery and its spare parts. The Act also allowed a 20 per cent reduction in sales tax for a period of three years for all new industrial enterprise.

In Peru, in 1959 the government instituted legislation which was designed to promote new and necessary industries. The Act also permitted full or partial exemption from import duties on new machinery and equipment not in competition with similar domestic products, and on raw materials and intermediate goods not produced in Peru.

2. Tariff protection. Another universally accepted incentive for industrial development is the protective tariff. It is used by most countries in their initial stages of industrial development to improve the prospects of commercial profitability of an industrial project sufficiently to attract investment. Tariff protection has been used successfully by such countries as the U. S. A., Canada and Japan. For example, the objective of the

protective tariff of Canada was written in 1921:

The objectives of the protective system in Canada have been and should continue to be:-

(a) To diminish, as far as possible, the importation of goods from foreign countries which can be produced at home.

(b) To facilitate the importation of raw materials which can not be produced at home

(c) To encourage the exportation of Canadian materials as finished products.

(d) To make Canada self-contained by developing and encouraging within her boundaries all legitimate activities that will give occupation to her people.³³

As can already be seen, the chief justification for the use of tariff protection in the industrialization of any country will be the infant industries argument.³⁴ This argument raises the point that initially, a country is unable to produce an originally imported product at competitive cost owing to the lack of trained workers, experience and so forth. Therefore, average production costs are likely to be high.... This obviously tends to make a new industry particularly vulnerable to price competition from older establishments in industrialized countries, especially from those which had previously marketed part of their output in the country in question. Hence the ability of

³³Canadian Manufacturers' Association, The Tariff, Published by the Canadian Manufacturers' Association, 1921.

³⁴Charles P. Kindleberger, International Economics (Homewood, Illinois: Richard D. Irwin, Inc., 1958), p. 217.

established foreign producers to undercut a new domestic enterprise is often a significant deterrent to industrial expansion.³⁵

Under these circumstances it is in the interests of the government of that country to grant tariff protection against foreign competition to ensure the establishment and development of the new local industry through profit incentives. The cost of industrial development to the country is not the absence of customs duty received by the government, but rather the high price the people have to pay for the locally-produced goods. But what of the temporarily increased prices paid by the consumer? It is reasonable to assume that in favourable instances, once domestic manufacturers attain a sufficiently low cost of production level, prices can be reduced to even below the level of import prices.

Tariff protection for infant industry is a useful and effective means of achieving profitable industrialization only as long as it remains temporary. However, too high a tariff could be unsuitable and unfair for the consumers who have to buy the products with higher prices

³⁵United Nations, "Process and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), p. 27.

unduly long due to the prolonging of tariff protection. The most important point which should be carefully taken into account is to avoid tariff protection becoming a permanent one. This is because, once an industry is started with the aid of tariff protection there tends to be lacking the incentive to become efficient and self-realizing (partly, owing to the lack of competition).

Another aspect of tariff protection arises here:

Where embargoes or very high duties are required for the protection of a local industry, the burden on the economy as a whole requires careful scrutiny, for ... its excess costs may constitute an appreciable handicap to all those activities, including other manufacturing establishments, which directly or indirectly purchase its high-priced product. In such case, this form of reaction to keen competition from foreign factories may tend to make the local industry an impediment to further industrialization. Up to a point cheap imports are an advantage in maintaining levels of living and in keeping industrial costs low.³⁶

Also, if it is the case that the industry cannot survive without the protection after a reasonable period of time, say five to ten years, the cause must be due to inefficiency or some inherent cost disadvantages. Any such industry should be discouraged, unless it is necessary for defence or other strategic reasons.³⁷ However, for this

³⁶United Nations, "Processes and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), p. 27.

³⁷Murray D. Bryce, Industrial Development: A guide of accelerating economic growth (New York: McGraw-Hill Book Company, Inc., 1960), p. 81.

case, direct subsidization should also be brought into consideration. Finally, it is important to avoid creating a tariff pattern that may offend a nation who is a good trading partner to the extent of inviting retaliatory tariffs against goods which the developing nation exports.

In attracting capital for investment in industries, a protective tariff serves a dual function: it draws into industry capital which would be expended in less productive domains, and above all, it opens the door for an inflow of foreign capital which otherwise would not come to the country.

Tariff protection has another beneficial side effect in that it may serve to strengthen the foreign exchange position of a country, first, by attracting foreign capital; second through import substitution (since these protective industries normally would produce goods which formerly had to be imported); and third, by producing goods which are exported.³⁸ Because rapid development, which entails importing capital goods, imposes a strain upon the foreign exchange position, therefore it is reasonable to encourage industries which are foreign exchange earning, i.e., export industries, and foreign exchange saving, i.e., substitutes for imports. By this policy, consequently, it will help to

³⁸United Nations, op. cit., p. 58.

improve the balance-of-payments of the country. Foreign exchange is important for buying capital goods for further industrial development. Therefore, in underdeveloped countries, shortage of foreign exchange is one of the main factors which retard the rate of industrialization.³⁹

Protection should be limited. In theory tariff protection should be kept to a minimum and remain flexible in application for the earliest possible removal, for many branches of Thai industry require some degree of protection in their initial development. Besides, there are instruments of policy other than tariff protection which the government should not ignore if it is anxious to initiate or accelerate industrialization at home. Therefore, a much broader and more constructive program is in order than merely that of making imports difficult to purchase by imposing a high tariff.

The government must ensure that more efforts should be spent in establishing an efficient network of communications and transport, providing sufficient power, and above all, creating adequate opportunities for general and technical education. In addition there exist such specific measures as provision of credit facilities, direct financial aid, etc., which may benefit particular industries.

³⁹Ibid., p. 60.

But although tariff protections in themselves are not sufficient incentives for industrial investment in an underdeveloped country, they may encourage available factors of production to be directed into specific industrial channels which would not otherwise have been ventured.⁴⁰ Thus unemployed or underemployed or less productive employed factors may be directed into industries which, directly or indirectly, may succeed in raising productivity of labour, and also in diversifying the economy and in laying the foundations for subsequent industrial growth.⁴¹

Tariff protection entails short-term losses by society if the "excess cost" (i.e., higher price) is greater than the normal gain. Then it would reduce total welfare. It is desirable, therefore, to balance the social cost with maximum social advantage,⁴² and keep the extent and duration of the burden on the consumer to a minimum. Nor should protection sustain, to the detriment of the community, an unsuitable or inefficient industry. However, it is evident that the least harmful system would be one of temporary

⁴⁰ Ibid., p. 68.

⁴¹ Ibid.,

⁴² Stanford Research Institute, The Role of Small-Scale Manufacturing in Economic Development, prepared for The International Cooperation Administration (Menlo Park, California: Stanford Research Institute, 1957), p. 147.

development tariffs granted on a highly selective basis in order to minimize the risk of their becoming permanent.

Cottage and Small-Scale Industry.

The definition of small-scale industry suggested by a UN report in 1958 on "The Development of Manufacturing Industry in Egypt, Israel, and Turkey" as manufacturing establishments employing ten or more persons were considered medium or large-scale industries while those employing less than that were considered to be small-scale industries.⁴³ While there is no clear-cut definition of a cottage industry, we take the term to apply to manufacturing concerns in which production is carried on by the owner himself with the assistance of his family, relatives or a few paid employees. In no case will the term be applied to a concern where more than nine persons are employed.

In trying to plan for industrial development, most underdeveloped countries face these problems:

1. Assimilation of a growing population in the working force.
2. The need to utilize existing labour resources more efficiently.

⁴³-United Nations, The Development of Manufacturing Industry in Egypt, Israel and Turkey (New York: Department of Economic and Social Affairs, 1958), p. 28.

3. Redeployment of labour personnel made redundant by innovation in and sophistication of industrial and agricultural production techniques.

Since the lack of complementary resources such as capital stock gives rise to structural unemployment, (in addition to seasonal unemployment,) long-term improvement in employment levels can be expected to follow expanded capital formation. The capital-intensive nature of major industrial undertakings, however, tends to limit the possibilities of increasing employment in this direction, thus forcing reliance on cottage and small-scale industries which require only small capital investment.

Industrialization is normally presumed to require a high degree of capital intensity and to result inevitably in an increase in unemployment of a technological kind. This may be unavoidable to some extent in a country where seasonal and disguised unemployment is of a considerable amount, as in Thailand. Yet the crucial problem of development in such a country is that of fuller and more effective utilization of existing labour resources in order to develop new sources of capital more directly related to the specific economic environment, resources and labour skills of the area in question. Thus the emphasis in the industrial development of such areas should be placed on utilization of abundant labour resources rather than on the role of scarce

capital resources. Cottage and small-scale industries seem to give good promise for this content. As the UN Department of Economic and Social Affairs observes:

Other things being equal, therefore, in most under-developed countries it is labour-intensive rather than capital-intensive industries that would appear likely to possess the greatest relative competitive advantage, even when the productivity of labour is somewhat lower than in the more advanced countries.⁴⁴

Cottage and small-scale industries can be justified on four main grounds:

1. The usual pattern of concentration on non-complex products makes intensive technical training of workers unnecessary. Therefore, even the presence of low order of technical skills tends to pose no serious handicap. As observed by Stanford Research Institute:

It is reasonable to suppose that more training and experience are required for those who manage large rather than small plants. In underdeveloped areas the scarcity of managerial talent is very acute.⁴⁵

⁴⁴ United Nations, Processes and Problems of Industrialization in Underdeveloped Countries (New York: Department of Economic and Social Affairs, 1955), pp. 69-70.

⁴⁵ Stanford Research Institute, The Role of Small-Scale Manufacturing in Economic Development, prepared for The International Cooperation Administration (Menlo Park, California: Stanford Research Institute, November, 1957), p.154.

2. Capital requirements are less than that required in large-scale units due to the utilization of existing buildings and the use of uncomplicated and inexpensive machinery. As Singer said:

A large-scale unit will involve the growing up of subsidiary economic complex and overhead investment around it and will require heavy investment in urbanization of a fixed pattern. The establishment of small-scale industry keeps the situation much more fluid. There is no doubt that an industrial pattern based on large-scale industries and industrial complexes involves more irreversible decisions than does a multiplying of the development islands with emphasis on small-scale industries.⁴⁶

Broadly speaking, a common characteristic of all underdeveloped countries is their extreme shortage of capital.⁴⁷

3. Cottage industry is a system of self-employment. There is an element of self-employment in the sense that employment of the owner and his family members will be carried up to the point where marginal productivity of labour falls to zero. By contrast, wage employment in large-scale units is only carried to the point where marginal productivity of labour is equal to marginal labour

⁴⁶ H. W. Singer, International Development: Growth and Change (New York: McGraw-Hill Book Company, Inc., 1964), p. 205.

⁴⁷ Stanford Research Institute, op. cit., p. 151.

cost,⁴⁸ (i.e., current wage employment). Therefore, with an abundant labour force, supply tends to be in excess of demand, and hence part of the labour force will remain unemployed unless there are adequate self-employment opportunities.

4. Cottage industry creates employment where labour is already available, thus obviating the need for relocation of workers and all attendant problems. By being centered on the home, it utilizes the dynamics of a family organization, while not interfering unduly with other family-group activities, (e.g., domestic tasks, seasonal agricultural employment). As Singer said, "The most tangible expression of unutilized resource is in the available spare time of people."⁴⁹

It is possible to distinguish between three main types of cottage and small-scale industries, that is: self-sufficient, handicraft and satellite.

1. Self-sufficient cottage and small-scale industries are characterized by a highly labour-intensive production process in which the workers employ their spare time in production of commonplace products for everyday use.

⁴⁸S. G. Peitchinis, The Economic of Labour Employment and Wages in Canada (Toronto: McGraw-Hill Book Company, Inc., 1964), p. 202.

⁴⁹Singer, op. cit., p. 202.

Hand-loom weaving provides an example of this variety of cottage and small-scale industries. While such activity may be considered preferable to idleness its generally inefficient and time-consuming nature means that it affords only limited prospects for economic advancement.

2. The handicraft type of cottage and small-scale industries are more specialized, seeking to utilize the skills of local craftsmen in the manufacture of products based on native arts. Provided that a suitable labour force is available and that markets can be found, such industry can result in growing income and employment.

3. The satellite variety of cottage and small-scale industries exists within the framework of a wider industrial complex dominated by large-scale industrial concerns. These cottage and small-scale industries are parts of a larger industrial venture, their function being limited to a specific process rather than to the production of completed products. Japan provides a good example of such a system in operation with considerable industrial production on a cottage and small-scale industry level being ultimately linked to a relatively small number of large enterprises at the centre of the industrial complex. Obviously this variety of cottage and small-scale industries, with production wholly responsive to the needs of the large industrial

production units at the centre, can operate only as a complement to large-scale industry.

Cottage and small-scale industry for the Thai economy. As an underdeveloped country which lacks capital, a high level of technology, experience management personnel and an abundant labour force; therefore, cottage and small-scale industry can play a significant role in the industrial development process.

Thailand, as a developing country, suffers most of the problems characteristic of such a country. The rapid rate of population growth has brought with it the problems of disguised unemployment, and unemployment, and greater difficulties in achieving higher per capita income. Higher income can only follow the higher productivity which is a direct result of the expansion of the scale of production. For Thailand, there is a limited scope to this expansion, a restriction imposed by the various elements of underdeveloped countries. This is a dilemma, as stated by the Ministry of National Development:

We must turn therefore, to look somewhere for a strategic point to strike. I believe that we could have found the solution in the small-scale and cottage industries. Higher productivity could be increased in a small-scale factory in the same manner as in large ones. With proper external assistance in technological innovation, marketing and financial investment it

could grow to be efficient and contribute to the economy.⁵⁰

For promotion of the cottage and small-scale industries, the Thai Government has made an application to the UN Special Fund, during the First-Five Years National Economic Development Plan (1961-1966), for helping in setting up a Cottage and Small-Scale Industries Service Institute designed to give comprehensive assistance to cottage and small-scale industries. It is proposed that the Institute should be located in Bangkok with branches later on at five regional centres. The Institute will provide technical extension services to cottage and small-scale industries. It will carry out surveys and prepare technoeconomic reports on possible cottage and small-scale industries and make these available to prospective entrepreneurs. Preparations are being made for the establishment of this Institute in anticipation of assistance from the UN Special Fund.

Implications of the Indian experience for the Thai cottage and small-scale industry program. The cottage and small-scale industries of Thailand could proceed along the same line as the highly successful small-scale production

⁵⁰P. Sarasin, Minister of National Development, an address on industrial development policy at the American Chamber of Commerce, Bangkok, 1965.

units--especially handloom and textile industries--of India, Hong Kong, and Japan.

The Thai program of cottage and small-scale industries should attempt to achieve effective organization as India has done. India had divided her cottage and small industries into three main areas each of which has a committee appointed by the Central Government to direct its affairs. Thailand should adopt a similar scheme and attempt to divide her cottage and small-scale industries into various areas, each area headed by a committee to direct its affairs. A possible division of Thailand's cottage and small-scale industries might be:

1. Textiles (cotton and silk)
2. Silverware, bronzeware and neilloware⁵¹
3. Handicrafts
4. Cottage industries
 - Hand pounding of rice
 - Vegetable oil
 - Matches
 - Mats.

The Indian program has been successful in absorbing surplus labour. Considerable employment has been generated

⁵¹Neilloware is a form of oxidized silver with inlaid and engraved designs.

by the Ambar Charkha⁵² program (see Table XXI). The Indian handloom industry has also provided fuller employment to about 3 million handloom weavers, and part-time employment to about 1 million spinners, besides whole time employment to carpenters, blacksmiths, etc, who repair equipment.⁵³

TABLE XX

EMPLOYMENT GENERATED BY THE AMBAR CHARKHA PROGRAM

	1956-57	1957-58	1958-59
Spinners' families	45,742	100,000	100,000
Weavers' families	5,000	3,000	4,000
Other	6,528	7,000	7,000
Total	57,270	110,000	111,000

SOURCE: Government of India, Second Five Year Plan Report, Planning Commission, April, 1960, p. 108.

The Thai Government should introduce a program to accomplish the same end. The government should encourage the export of the cottage and small-scale products especially Thai silk, silverware, bronzeware, neilloware and handicrafts products.

⁵² Ambar Charkha is a rough type of hand-spun cloth.

⁵³ Government of India, Third Five Year Plan, Planning Commission, June, 1960, p. 196.

Another important area where Thailand should imitate the Indian program is in the establishment of industrial estates in order to promote small-scale industries. In order to establish an industrial estate the government should find large tracts of land on good sites which are far from any residential area, easily accessible by transportation, and with the necessary utilities such as power and water. If possible, the government should provide factory buildings or workshops for lease or sale by installment. This will help the small industrialist who is having difficulties in obtaining land title and help relieve the financial problem.

Furthermore, an industrial estate can be used as a centre for a variety of activities which are beneficial to the development of small-scale industry. It provides an excellent location for advisory and information devices, financial institutions, training programs, and many common facilities which can be useful to a group of industries.

Industrial Finance Corporation (of Thailand)

The development of the manufacturing sector is often associated with its need for substantial capital investment. One of the major obstacles to development in manufacturing is the absence of appropriate institutions to provide the funds needed either by mobilizing the available savings in

the country or by borrowing from abroad. The shortage of such institutions makes it difficult to seek the funds, and the heavy incidence of capital charges is one of the principal reasons for the high costs of production. This will contribute to the high prices of the products and hence discourage their sale in competitive markets, thereby retarding the growth of industrial development.

Many countries, either developed or underdeveloped, have established such institutions in order to provide the funds and various kinds of technical services. These institutions are sometimes named Industrial Development Banks such as The Industrial Development Bank of Canada; sometimes they are called Industrial Development Corporations or Industrial Finance Corporations such as The Industrial Development Corporation of Burma and Industrial Finance Corporation of Thailand.

The Industrial Finance Corporation is a dynamic institution which performs the role of a catalytic agent in the industrial sector. The basic task of the corporation is to promote private enterprise, bring forth existing opportunities for industrial investment, and create favourable conditions for the development of managerial and entrepreneurial skills, i.e., provide funds and various technical services fostering capital and entrepreneurship. However, the organization, structure, range and scope of

activity of an Industrial Finance Corporation varies from one country to the next, depending on the economic circumstances of the country and its aims and objectives concerning economic development. Nevertheless, since underdeveloped countries have some common feature such as low savings, unorganized capital market, lack of entrepreneurial activity, and lack of managerial and technical services, Industrial Finance Corporations are required to perform basically the same functions everywhere.

Industrial Finance Corporation of Thailand. Capital markets in all underdeveloped countries including Thailand are underdeveloped. In other words, the capital market is more restricted when compared to that of more advanced countries like the United States and England. The result is that the ability to absorb new security issues is limited. This makes it difficult for the small and medium-sized firms to acquire needed funds. Certainly they can borrow from private commercial banks, but they will have to pay higher rates of interest, owing to the risk the banks have to take since these firms are not in a position of outstanding credit and reputation. Moreover, although funds can be obtained from commercial banks, they are in the form of short-term loans. This is due to the conviction of the banks that since demand deposits require a high level of liquidity, they should invest on the shortest possible term.

There is no serious shortage of capital (especially short-term) for the large firm in Thailand. In part, this can be explained by the fact that most of the larger firms can raise funds for their investment by selling bonds or stock to the public. Furthermore, large firms usually have a good credit position and general reputation. Therefore, they are able to borrow from the private banks at relatively low rates any time they need capital.

In order to make funds available to entrepreneurs, particularly those in small and medium-sized firms, the government of Thailand set up the Industrial Finance Corporation of Thailand (IFCT) on October 6, 1959. The Act was subsequently amended on December 11, 1962 and on July 12, 1963. The IFCT is privately-owned and is somewhat equivalent to a development finance company or a development bank. The main purpose of establishing the IFCT is not only to make funds available to the investors, but also to offer financing facilities which are more attractive in terms and conditions than those which are generally available from other financial institutions. It will be able to encourage increasing industrial activity in Thailand by assisting in the establishment, expansion, and modernization of private industrial enterprise and encouraging private investment in manufacturing and other industries. The

specific objectives of the IFCT are:⁵⁴

1. To assist in the establishment, expansion, or modernization of private industrial enterprises.
2. To encourage the participation of private capital, both internal and external, in such enterprises.

To pursue the above objectives the IFCT may, among other things:-

- a) Provide finance in the form of long-term or medium-term loans, with or without security; purchase or subscribe for shares or other securities; acquire any other interest;
- b) Underwrite issues of shares or other securities;
- c) Guarantee loans from other private sources;
- d) Borrow funds, either in Thailand or from abroad, for its business;
- e) Furnish administrative, managerial and technical advice, and assist in obtaining administrative, managerial and technical services to private industrial enterprise;
- f) Engage itself in such other things as may be incident or conducive to the attainment of its objectives.

⁵⁴Industrial Finance Corporation of Thailand, IFCT Quarterly Resume, Quarterly Issue (July-September, 1967), prepared and compiled by Project Planning & Research Department of IFCT (Bangkok: Government Printing Office, 1967), p. 6.

The IFCT was registered in 1959 as a limited company and started its business in 1960 with an authorized capital of baht 100,000,000 (U. S. \$ 4,807,693), of which 6.1 million Baht have been paid up. In addition to that, the government advanced a long-term, interest-free loan of 15 million Baht to it, with the transferred surplus earnings from the liquidation of the government owned Industrial Bank. Borrowing from the government added up to total funds of 36,821,667 Baht at the end of 1960 (see Table XXII).

In 1962 the corporation was reorganized. This led to considerable improvement, and with a rapid increase in the number and total of loans granted, the Corporation felt the need to obtain additional capital funds. The government advanced a further loan of 20 million Baht at a low rate of interest in 1962 (see Table XXII). In 1963, negotiations were completed to obtain loans of 57.2 million Baht from the Kreditanstalt fuer Wiederaufbau (KfW) of West Germany, and loans of 52 million Baht (U. S. \$ 2,500,000) from the IBRD (see Table XXIV).

In 1964, the IFCT called for capital shares to be paid up to 30 million Baht, roughly 43 per cent of these shares being owned by the Thai investors, 13 per cent by the International Finance Corporation affiliated with the

World Bank,⁵⁵ and 44 per cent by foreign investors. No shares are owned by the Thai Government.

In 1965 and 1967 the government granted loans of 30 and 20 million Baht respectively. Therefore, as can be seen, very large additional funds are being secured (see Table XXII).

Analysis of the financial situation and the resulting operations.

1. Analysis of the financial situation. As mentioned earlier, 56 per cent of the shares belong to Thai citizens while 44 per cent belong to foreign investors. Among the foreign investors who hold shares, approximately half are commercial and investment banks in the United States, and the rest are commercial and investment banks in other countries. In the light of the ownership, the corporation is quite safe from foreign domination as long as the majority of the share owners are Thai citizens. Since the IFCT is private share holding, a precaution will have to be taken in order to prevent initial or subsequent concentration of voting power. If the voting power is concentrated in one or a few owners, it might lead to

⁵⁵Under article 16 of IFCT Regulations, these shares are considered to be shares held by citizens of Thailand, thus making the total Thai holding 56 per cent.

TABLE XXI

IFCT'S SOURCES OF FUNDS

Baht

Sources of Funds	1960	1961	1962	1963	1964	1965	1966	1967
Share Capital (paid up)	6,100,000	6,100,000	6,100,000	18,687,000	30,000,000	30,000,000	30,000,000	30,000,000
Reserves	0	1,700,000	2,550,000	3,550,000	4,850,000	6,500,000	8,330,000	9,198,467
Surplus Earnings	762,562	163,930	83,771	145,484	14,691	15,941	25,595	3,092,796
Borrowings:								
-Baht Currency	29,959,105	29,884,744	48,126,691	48,661,184	48,732,684	78,802,684	78,857,684	98,857,684
-Foreign Currency	0	0	0	57,200,000	109,200,000	109,200,000	108,349,760	76,332,373
Total Funds	36,821,667	37,848,674	56,860,462	128,243,668	192,797,375	224,578,625	225,567,039	217,481,320
Baht Currency Funds	100%	100%	100%	55.40%	43.36%	51.36%	51.97%	64.90%
Foreign Currency Funds	0%	0%	0%	44.60%	56.64%	48.64%	48.03%	35.10%

NOTE: 1960 - IFCT's first year operation.

SOURCE: Industrial Finance Corporation of Thailand.

TABLE XXII

IFCT'S BAHT CURRENCY BORROWINGS
FROM THE THAI GOVERNMENT

From the Thai Government	Baht
1960 (December 31)	14,959,105
1961 "	(74,361)
1962 "	(1,758,053)
1963 "	534,493
1964 "	71,500
1965 "	70,000
1966 "	55,000
50 years at no interest	13,857,684
1960 (April)	15,000,000
30 years at no interest	
1962 (November)	20,000,00
first 20 yrs. at no interest	
next 20 yrs. at 3 %	
last 10 yrs. at 5 %	
1965 (September)	30,000,000
15 yrs. at 6 %	
1967 (April)	20,000,000
30 yrs. at 6 %	
Total Baht Borrowings	98,857,684

NOTE: * = After liquidation of the government-owned Industrial Bank (IFCT's forerunner), the Thai Government transferred the Bank's assets (cash plus the Bank's outstanding loans to private enterprises) to IFCT in the form of a loan, and appointed IFCT as the Bank's "receiver in equity". Amounts in subsequent years as shown in the same column represent IFCT's collections of loan repayments net of all expenses and of one repayment to the Bank's creditor in 1962.

SOURCE: Industrial Finance Corporation of Thailand.

TABLE XXIII
IFCT'S FOREIGN CURRENCY BORROWINGS
FROM ABROAD

Foreign Currency Borrowings	Baht
1963 (December)	57,200,000
Loan from Kreditanstalt fuer Wieder- aufbau (KfW)	
15 yrs. at $5\frac{1}{2}\%$ (DM 11,000,000)	
1964 (March)	52,000,000
Loan from IBRD	
15 yrs. at $5\frac{1}{2}\%$ (adjustable)	
(U. S. \$ 2,500,000)	
Total	109,200,000
Less: unutilized portion of IBRD Loan after the end of agreed time limit (U. S. \$ 1,455,384)	30,271,987
Total Foreign Currency Funds (to date)	78,928,013

SOURCE: Industrial Finance Corporation of Thailand.

TABLE XXIV
LOANS UNDER SIGNED AGREEMENTS

Millions of Baht

Year	No. of Loans	Total Amount	Baht Currency	Foreign Currency
1960	1	2,000	2,000	0
1961	7	9,800	9,800	0
1962	11	13,400	13,400	-
1963	13	18,300	18,300	0
1964	6	19,105	10,655	8,450
1965	12	47,498	25,775	21,723
1966	29	99,450	69,250	30,200
Total	79	209,553	149,180	60,373
1967				
1st Qtr.	5	5,900	5,900	0
2nd Qtr.	5	19,562	19,562	0
3rd Qtr.	5	28,944	28,944	0
Total	94	263,959	203,586	60,373

SOURCE: Industrial Finance Corporation of Thailand.

TABLE XXV

ENTERPRISES UNDER IFCT'S ASSISTANCE
(DECEMBER 1960 - JUNE 1967)

	No. of Clients	Committed Loans	
		(Millions of Baht)	%
Metal Mining	3	5.500	2
Food	9	46.470	20
Tobacco	5	5.545	2
Textile	11	13.920	6
Wood	4	10.085	4
Paper & Paper Products	1	8.000	4
Rubber Products	3	6.600	3
Chemical & Chemical Products	9	14.900	6
Non-Metallic Mineral Products	2	11.500	5
Basic Metal Industries	2	8.408	4
Metal Products	4	16.435	8
Machinery	2	3.062	1
Electrical Machinery & Appliances	2	5.000	2
Transport Equipment	1	1.400	1
Miscellaneous Manufacturing	2	3.150	1
Construction	2	7.880	3
Storage & Warehousing	3	16.500	7
Personal Services	7	48.660	21
Total	72	233.015	100
A BROADER GROUP CLASSIFICATION			
Mining	3	5.500	2
Manufacturing	57	154.475	67
Construction	2	7.880	3
Storage	3	16.500	7
Services	7	48.660	21
Total	72	233.015	100

SOURCE: Industrial Finance Corporation of Thailand.

collusion with the possible result that the IFCT will not be able to achieve its objectives. However, participation by foreign groups in the IFCT's equity will place at the IFCT's disposal foreign exchange resources which will be used for the financing of the foreign exchange component of investment, particularly in industries which import many capital goods from abroad.

Broadly speaking, the IFCT should start on a strong financial basis in order to strengthen its financial position and enlarge its services so as to give the widest scope possible. However, how much in the way of resources are needed will depend on the scope of the functions that it will perform, the state of the country's economy, and its capital market.⁵⁶ That is to say, the resources of the corporation should be equal to the tasks which it must perform.

Although the corporation should have a strong financial basis, it must be borne in mind that the debt from such a financial basis imposes a fixed charge, and corporations may find it difficult to meet the interest obligations on the debt, at least in the first few years of operation. However, to determine the financial basis, the

⁵⁶ R.D. Agarwal, "Industrial Development Bank - A Model for Underdeveloped Countries," Indian Journal of Economics, Vol. XIV, No. 176, July, 1964, p. 279.

World Bank has suggested a debt-equity ratio of 3:1 for Turkey, India, Pakistan and Iran.⁵⁷ This ratio is a good basis to establish the financial position, but in fact the ratio will vary, depending on the circumstance and state of the economy in each country. The financial resources of the IFCT at the end of 1967 were approximately 4:1 by the debt-equity ratio (see Table XXIII), slightly higher than what the World Bank suggested to Turkey, India, Pakistan and Iran.

The reason that the Corporation's debt-equity ratio is high may be that the Corporation did not have to pay as much of the burden as it should have because a large amount of resources came from the government in the form of free-interest loans and low rate interest on long term loans (see Table XXIV). Thus it may be concluded that the status of the IFCT either in the form of ownership or in the form of financial position at the end of 1967 was a sound one.

2. Analysis of the operations. The corporation did not immediately achieve as much as was expected of it, for the scale of its operation was very limited. In the first eighteen months of its existence only eight loans were made of an aggregate amount of 11.8 million baht (U. S. \$56,500),

⁵⁷M. S. Joshi, "The Development Bank," Indian Economic Journal, Vol. VIII, No. 1, July, 1960, p. 254.

(see Table XXVI). However, since the corporation was reorganized in 1962, the scope of its operation has been increasing. Both the number and the amount of loans have increased. It is noticeable that in 1964 the number of loans decreased but the amount of loans was increased because of a few large project loans made in this year. In 1965 and 1966, both the number of loans and the total amount of loans were increases strikingly. This was especially true in 1966 when the number of loans was 29 with a total amount of 99.45 million baht. In 1967, 5 loans with a total amount of 54.406 million baht were made. It can be said that loans have continued to increase since the IFCT started its operation.

Classification of loans given to the enterprises can be seen from Table XXVII. Under a broader group classification it is indicated that more loans have been given for manufacturing investment. Therefore, it can be expected that the rate of manufacturing growth has been increased as a result of these loans. We then can infer that the result of the IFCT's operation has been in the right channel, i.e., stimulating the investment in manufacturing which will result in an increase in aggregate national productivity, an increase in national income, and an increase in the sound position of foreign exchange mainly by import substitution.

In addition to direct loans, the IFCT also made available a loan guarantee service. By the end of 1966, approved guarantee loans of 20 million baht had been given by the IFCT.

Another point which should be mentioned here is that more than half of the loans in 1966 were to borrowers in rural Thailand, thus indicating a changing pattern of loans over previous years, when two thirds of IFCT loans went to enterprises in the Greater Bangkok area. This shift illustrates the expansion of commerce and industry in areas outside the capital city. It also reflects the IFCT's support of the government's policy to concentrate development efforts in the outer provinces. More development in the outer provinces is badly needed if the country is to avoid political crisis caused by the imbalance of regional development and communist infiltration. At present too much development is concentrated only in the central part of the country.

Recommendation. In regard to the main purpose of the IFCT, which is to encourage investment in industry and to promote economic development in Thailand, the writer recommends that:

1. The IFCT should coordinate its activity with the activity of the Board of Investment in encouraging investment to promote industries that receive priorities in the

program of industrialization, which are designated by the Board of Investment to receive some allowances such as income tax exemption and free duty on machines, etc. The IFCT could supplement its activity by offering long term low rate of interest loans (which is lower than that given to the unpromoted industries) to such promoted enterprises. Thus it will create more incentive for investment in that enterprise.

2. In order to supplement the government policy in developing outer provinces, the IFCT could do the same thing by offering a long term lower rate of interest to the entrepreneur who will undertake investment in the outer provinces. Moreover, the low rate of interest given to the entrepreneurs may vary among the provinces in each region in order to stimulate investment in some particular region. For instance, at present there is an urgent need for development in the northeastern part of Thailand because this area is far behind the other parts of the country. In order to stimulate industrial development in this area, the IFCT should offer loans with a lower rate of interest than given to some other areas of the country.

3. Besides the renting duty, the underwriting of issues of shares, the guarantee of loans and the provision of technical services to private enterprise (as already mentioned under the title of special objectives of IFCT on

Page 189), the corporation should also undertake the research and surveys of profitable investment opportunity. In doing so, a heavy expenditure will be incurred by the corporation. However, because the corporation is a privately owned company, the result of research and survey will be of benefit to the public. Therefore, the writer would like to recommend that the government should contribute to the cost of research and survey which is carried out by the corporation.

CHAPTER VII

SUMMARY AND CONCLUSIONS

Purpose of the study. The purpose of this study is to examine the role of the industrial sector in economic development and the role of government in the industrialization of underdeveloped countries with special reference to Thailand.

The role of government in economic development. The role of governments in economic development in underdeveloped countries is much more active than that of governments in advanced industrialized countries. Since in underdeveloped countries there is a shortage of capital and entrepreneurs, governments try to initiate and continue the process of economic development. Government involvement in the process of economic development has increased steadily in most underdeveloped countries since the end of the Second World War (1945). Because of the impotence of both direct and indirect intervention, governments of various underdeveloped countries are engaged in long-term economic planning. Thailand started her First Five Year National Economic Planning from 1961 to 1966, and at present is engaged in the Second Five Year Plan from 1967-1971. Even though Thailand is planning her economic development, the government has not taken over the economy.

The government sector in Thailand is keyed to the free enterprise system with government trying to support the actions of private enterprise and create a good environment for its operation.

Economic problems. Thailand was seriously damaged by the Second World War in her economy as well as in her infrastructure including roads, rails, power stations, and ports. The country was also facing the problems of balance of payments deficit and the depletion of foreign exchange reserves. Therefore, immediate steps were taken by the government after the Second World War to reconstruct the infrastructure and to restore foreign trade.

Economic structure. Thailand is an agricultural country. The total area of the country is about 514,000 square kilometres. It has a population of about 30 million at the present. The density of population is approximately 58 persons per square kilometre. Over 80 per cent of the population is employed in the agricultural sector and only 3.5 per cent is employed in the industrial sector.

Industrial and Agricultural development. Economic development in Thailand is following the doctrine of "balanced growth" between the agricultural sector and the industrial sector. However, since Thailand is predominantly agricultural, the agricultural sector receives first priority in development. Furthermore, one of the most

important pre-conditions of industrial development is the achievement of a rate of increase in agricultural productivity which exceeds the current rate of increase of demand in the agricultural sector in order that some part of the product may be supplied to the industrial sector which does not produce food.

However, in view of a high rate of population growth--3 per cent per annum--serious problems with respect to the levels of employment and income will arise in the future when the agricultural sector can not absorb all the manpower and can not be productive enough because of the limited supply of land. As this occurs, industrialization will become more important in the process of economic development of Thailand. Industrialization not only makes possible an increase in productivity, but also helps to absorb the growing labour force.

General recommendations. The purpose of these general recommendations is to provide a guide for the economic development of Thailand--to expand more rapidly and with greater stability.

Economic development, in order to begin and grow in various regions of the country needs a favourable economic climate (i.e., all kinds of public utilities). Therefore, development of the infrastructure and social overhead capital is the first basic need.

Agriculture is the main sector in the Thai economy. Its rate of growth can be increased by various means such as improving production by introducing new techniques. Improvement in water supply, transportation, marketing and agricultural credit are also necessary.

Industrial development can be stimulated by the introduction of tax and tariff incentives designed to encourage private investment in manufacturing in the country. Cottage and small-scale industry can play a significant role in industrial development because they require less capital and can function with a lower level of production techniques than large-scale industry. Since lack of capital investment is a main obstacle for industrial development, an industrial financial institution is necessary in order to provide funds for the entrepreneur.

Development according to the recommendations above involves a heavy amount of capital. It is not recommended, however, that the government try to use inflationary methods to finance economic development. The major part of financing should come from domestic sources, supplemented by external sources.

Finally, successful development will be determined by the efforts of both the government and business community to upgrade their standards of organization, co-operation and plain honest administration.

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APPENDIX A

PRICES OF PRIMARY COMMODITIES,
(IN U.S.\$ PER 100 POUNDS).

Year	Rice	Rubber	Tin
1948	7.06	19.8	95.7
1950	5.49	35.4	90.4
1951	5.70	55.3	130.0
1952	6.89	31.4	118.2
1953	7.23	22.0	89.4
1954	6.58	22.0	86.9
1955	5.38	37.3	90.2
1956	4.98	31.6	95.2
1957	5.06	29.0	91.4
1958	5.70	26.2	90.5
1959	5.08	33.1	97.2
1960	4.59	35.3	96.5
1961	4.94	27.3	110.0
1962	5.66	25.6	109.7
1963	5.28	23.7	111.6
1964	5.05	22.2	151.8

NOTE: Data for 1949 not available.

SOURCE: IMF.

APPENDIX B
 WORLD TRADE: VALUE IN MILLIONS
 OF U.S. DOLLARS

Year	Exports(fob.)	Imports(cif.)
1948	53,300	59,100
1949	53,900	58,900
1950	55,200	58,300
1951	74,800	80,100
1952	72,400	78,800
1953	73,400	75,300
1954	76,200	78,600
1955	83,000	88,100
1956	92,300	97,200
1957	99,100	106,800
1958	94,600	100,200
1959	100,300	105,900
1960	112,300	118,600
1961	117,400	123,500
1962	123,600	131,300
1963	134,800	142,500
1964	151,200	158,700

SOURCE: IMF.

APPENDIX C

A SUMMARY OF THE PROMOTION OF INDUSTRIAL
INVESTMENT ACT OF 1962

- The State guarantees against expropriation or nationalization of private industry.
- The State guarantees not to set up any competing enterprise in 'promoted' industries, i.e., industries entitled to benefits.
- The entity, if duly registered in Thailand, may own land required for its operations.
- Promoted entities are exempted from import duties and business taxes on machinery, parts, components and accessory equipment required and on prefabricated structures, or component parts and materials for structures, if equivalent materials are not produced locally.
- A new promoted industry (not applicable to expansion of an existing industry) will be exempt from income taxes for a period of five years beginning with the first year when sales or incomes are recorded.
- A promoted industry may freely remit foreign currency covering return of capital, profits, interest and principal of foreign loans, royalties, or other like necessary payments.
- Entry of necessary alien experts, technicians,

or other personnel required will be permitted.

- The promoted industry may export its products if not contrary to the security and economic interest of Thailand.

- Industries, numbering 130 in all, are listed and classified as groups A, B, or C according to priorities.

- Specified industries, identified as Group A in the Act, will be exempted from full import duties and business taxes on raw or necessary materials for a period of five years; another classification of industries, Group B, will be exempted from 50 per cent of such duties and taxes for five years.

- Other industries, considered of lower priority than Group A and B, classified as Group C in the Act, may upon recommendation by the Board of Investment and approval by the Cabinet, receive exemptions not exceeding one-third of the import duties and business taxes on raw materials.

- Promoted industries may receive, upon specific approval by the Board and for such period of time as it may authorize, additional benefits such as:

- a. Prohibition or restriction of imports into Thailand of like products.
- b. Increase in customs duties on like products imported.
- c. Exemption from or reduction of export taxes on products exported.
- d. Exemption from business taxes on exports.

APPENDIX D

COMPANY INCOME TAXES

Companies organized under foreign laws which carry on business in Thailand are, to the extent that incomes are derived from sources in Thailand, subject to income taxes in the same way as companies organized under Thai laws.

Base: Net profits derived from business carried on in Thailand in any accounting period of twelve months. Net profits are ascertained in accordance with generally accepted accounting principles, subject to conditions commonly found in income tax laws of most countries.

Rates: Tax is charged on net profits at the following rates:

On the first 500,000 Baht	15 %
On the next 500,000 Baht	20 %
On all in excess of 1,000,000 Baht	25 %

Payment: Annual payment within 150 days from the closing date of the accounting period.

APPENDIX E ¹

UNDERDEVELOPED AND DEVELOPED COUNTRIES: BASIC RATES
OF TAXES ON PROFITS OF CORPORATIONS, 1958
(AS PER CENTAGE OF TAXABLE INCOME)

Underdeveloped Countries

Middle and Far East		Africa		South America	
Burma	56.6	Ghana	45.0	Jamaica	40.0
Israel	53.7	Sierra Leone	45.0	Mexico	4-33
Indonesia	52.5	Gambia	45.0	Chile	30.7
Ceylon	51.8	Nigeria	45.0	Dominion Republic	7-30
India	51.5	Sudan	12-40	Venezuela	4-28
Iran	4-50	Rhodesia	37.5	Peru	10-20
Pakistan	49.0	Kenya	25.0	Puerto Rico	5-20
Lebanon	5-42	Uganda	25.0		
Malaya	30	Tanganyika	25.0		
Iraq	10-30	Lieria	5-25		
Philippines	28	Fr.W.Africa	22.5		
Turkey	23.5				
Thailand	15-25				

Developed Countries

North America		Europe		Other	
United States	52.0	Norway	63.0	Japan	52.0
Canada	45.0	Austria	59.0	New Zealand	50.8
		Sweden	56.0	Australia	40.0
		Germany	55.0	South Africa	30.0
		Italy	48.0		
		United Kingdom	45.5		
		Netherlands	43.0		
		France	41.8		
		Belgium	32.4		
		Switzerland	30.0		

SOURCE: J. Harvey Perry, Taxation and Economic Development of Ghana (prepared for the Government of Ghana, United Nations Report No. TAO/GHA/4, Rev. 1, July 1, 1959)

¹U Tun Wai, "Taxation Problems and Policies of Underdeveloped Countries", International Monetary Fund, Staff Papers. Washington, D. C. Vol. IX, 1962, p. 437.