

STRATEGIC ELEMENTS IN THE RAPID ECONOMIC GROWTH OF TAIWAN

SHIGETŌ KAWANO

The termination of the Japanese colonial tie, the new supply of American aid, and the peculiar domestic conditions, etc., acted, through multiple processes, as impeding as well as accelerating factors for the post-war economic development of Taiwan. By tracing these processes, the author tries to suggest that there may be such general factors as will effectively be applicable to the other underdeveloped countries on the one hand, and such historical, social, and international factors which may preclude their ready applicability on the other.

On the grounds that Japan is the only industrially developed country in Asia or is the only Asian country which has already been accepted into the community of advanced nations, it is frequently held that Japan's economic history should be a model for economic development in the other countries of Asia. It is thought that Japan's experience within the same Asian geographical and social environment is more relevant than the experience of the countries of western Europe or America. Recently, however, considerable attention has also been paid to the case of Taiwan, whose development experience may prove still more relevant to other Asian countries than that of Japan. An area which became independent of the rule of the Japanese after the Second World War, Taiwan is considered to be exhibiting an outstandingly high rate of economic growth, which means that she may be expected to provide a living example to the many countries of Asia which are also seeking substantial economic development as newly independent countries in the post-war world.

To determine whether Taiwan can be such an example, however, it is first necessary to make clear in theoretical terms the general and special nature of development there, as the same historical experience, the same historical process, can never be repeated in another country in its original and unchanged form. The processes of development differ in a variety of ways from country to country in accordance with such conditions as the period-environment in which they take place, the historical and social heritages of the countries in question, their natural resources, population, and technology. One country's experience will comprise both elements whose lessons can be transferred to other countries more or less as they stand and others which are not of this kind. Again, experience of the kind which can be transferred to other countries will comprise both elements which will require time, and

elements which will not. In regard to the general question of one country taking another as its model we must first make clear what are the inherent, special conditions and what are the general conditions in the economic development of the relevant country. As regards the matter of whether or not the country can be taken as a model, it is the latter of these two kinds of condition which comes into question.

In the following we propose to trace, from this point of view, the over-all features of the economic development of Taiwan.

I. THE ECONOMIC RESULTS OF POLITICAL INDEPENDENCE

Our survey begins with an examination of the general economic results of "political independence" bestowed on many countries by the Second World War. In economic terms, this is generally taken to mean the road leading from a "colonial economy" to the formation of a "national economy" or "independent economy," and as an effect of political independence it is believed, and expected, that all evils and shortcomings involved in the "colonial economy" will be wiped away and that the economic development and economic stability, which may be enjoyed by a politically independent country, will materialize.

But, we may ask, what have really been the economic results of political independence? It is natural that the negation of the relation of colonial subjection to the mother country may prove advantageous in many respects in the development of a so-called independent economy, but at the same time we may expect that there will be no small number of problems associated with the attempt to establish a new economic order. In itself the negation of one form of economic organization does not necessarily signify the development of a new form of economic organization. Because the change-over of the economic organization is fraught with the danger of confusions great and small, and if the change-over is to be followed by the formation of an independent economy, the support of conditions unnecessary under the circumstances of a dependent economy will be required. What, in the event, are the fruits obtained as a result of political independence, and what are the new conditions necessary for the attainment of an independent economy? As regards this question there has hitherto been a tendency to treat negation of the colonial relationship as identical to the normal development of the post-independence economy and to regard technological and physical conditions such as capital and technology as all that was lacking, but has this proved to be so? As regards this we must first consider in general terms the problems brought about by the abolition of colonial relationships.

The first problem would seem to be the result of the termination of the so-called colonial profits. As regards this, it has been frequently thought that vast profits flowed unilaterally out of the colony to the mother country and that reinvestment for the purposes of the economic development of the former was not carried out. Consequently, it is thought that the cutting off of this

out-flow will be made possible when the independence was attained and that this will bring about indisputable gains to the newly independent country. But, in this case, we have to take into mind that we presuppose the reversion of the capital of the mother country to the latter without compensation or under conditions similar to this and with the continuing accrual of the "colonial profits" to be realized automatically. For, in the case independence should be accompanied by a withdrawal of the capital of the mother country we may expect that the scale of the economy will inevitably be reduced in greater or lesser measure, and, as we show below, the accrual of colonial profits is difficult because of the market instability usually accompanying independence. But assuming that there is nothing problematical in these two consequences of political independence we may suppose that it will be more or less possible for independence to have the meaning ascribed to it. Even assuming that the accrual of profits is difficult we may expect that the physical capital left behind can be put to use in a way appropriate to its nature and that in so far as such use is possible it will also possess, potentially, positive productive functions, especially in the international balance of payments both in the short and long term. Because, most of this physical capital could be considered to have been adapted to the international economic situations, even though the colonial relations intervened. Basically, however, the question on the utilization of physical capital is one of changes of ownership, and is dependent on the conditions under which the colony is granted independence.

Secondly, the evils of monoculture are frequently spoken of. Monoculture is typical of an economy excessively dependent on the mother country and centred on the production of a few primary products such as foodstuffs and industrial raw materials; consequently, there is a great danger that the economy will be thrown into an unstable condition by fluctuation in the economy of the mother country; and further, the economy is placed in an extremely disadvantageous position in price and income formation by reason of the special nature of these products. In fact, as a result of their demand elasticities being small, their prices are subject to sudden increases in the short term as a result of crop failures or increases in demand, while on the other hand they exhibit sudden decreases as a result of good crops of falling demand. Again, in the long term the appearance of substitute articles for use by industry will gradually worsen their position in income formation. What is more, to break free or change over from this condition is no easy matter because the economic system of the country is in a state of dependence on the mother country. This means that specific institutions and policies centred on the material interest of the mother country stand in the way of such a thing. Consequently, we may expect that political independence will make possible the correction or abolition of these monoculture economies in political and policy terms.

Thirdly, and this is connected with the above, there are what may be called the evils deriving from colonial monopoly. By being placed under

the exclusive and monopolistic political control and administration of a specific country the normal development of colonial countries is impeded. We can scarcely say that this relation has always been clearly and precisely analysed hitherto, but for the present it may be permissible for us to consider this problem as follows. As a result of this monopoly neither the capital nor the technology which should come from other countries do in fact come into the country. Consequently, both opportunities for investment and the scale of investment are subject to limitations. Also, the scale and tempo of the economic development of the country as a whole will be impeded to that extent, and further, the colony's directions and spheres of choice in terms of markets are limited. As a result of special linkages with the mother country's market being demanded by means of tariffs and other devices, sales of products may be given advantageous positions on the mother country's market, while on the other hand their competition on the international market will be subjected to restrictions. As regards purchases of consumer goods and capital goods, the influx of foreign goods into the colony, and therefore competition, will be impeded, the colony being regarded as a captive market serving the mother country. This means that to this extent the market will be an imperfect one, and that as a result the efficient and rational choice of industries and technology will be impeded, but that political independence may be expected to eliminate these altogether.

In this way great expectations are entertained with regard to the effect on economic development of political independence, and this may be called the positive aspect, the "plus" side of the independent economy. But it is needless to say that a large number of additional conditions are required if these potentialities are to be realized in practice.

Firstly, there is the question of the criteria to be adopted for the change-over of industries. It is frequently said that "independence" is "loss of reliance." An economy which has lost its paternalistic links with the home country is placed in a state of "loss of economic reliance," even if only for a time. The industries which have been built up in relation to the mother country's market and which have hitherto enjoyed preferential treatment must now seek new markets or else the former colony must seek some way towards a change-over of industries. But as a practical question a change-over of industries can scarcely be accomplished at once, and the discovery of new markets, too, is in general no easy matter. It is therefore natural that the productivity of industry should fall, and that the maintenance and securing of the "colonial profits" should also become difficult. Here the question of the decline of the rate of capital accumulation arises, at least as a transitional problem, and the manner in which the newly independent countries are to cope with this becomes a crucial problem for each of them. Before they take up the question of the reversion of the "colonial profits," the realization of these profits itself is rendered difficult by the change in economic circumstances occasioned by independence.

Secondly, the matter of how to take steps to obtain the necessary capital,

inclusive of the above considerations, comes into question. Assuming that up to that time the profits accruing to capital belonging to the mother country have been leaving the country in their entirety and that after independence these are all retained within the former colony, we may suppose that the reduced remittance of "colonial profits," such as it is, will be a positive advantage to the country in the matter of obtaining capital. In fact, however, there is no small number of cases in which a part, or the greater part, of these profits was being reinvested, and there is also no small number of cases in which new investment capital came into the country from the mother country year after year over and above these reinvested profits. In this situation, how was one to supplement the available capital and to take positive steps to ensure its increase? It was natural that government capital from the former mother country should no longer flow into the country, and the entry of private capital into a region which was now a foreign country could be expected to be subject to hesitations for both political and economic reasons. In particular in those cases, mentioned above, in which the influx of private capital had taken place against the background of government capital influx and assistance, a new influx of capital could be expected to be impeded and again, in those cases in which there was a fall in the productivity of industry following independence it could be expected that an influx of such capital could scarcely be looked for. Consequently, special measures became necessary if one was to seek a positive influx of foreign capital into the now independent country, but what was to be done by way of such measures? Again, supposing that foreign capital was scarcely to be looked for there remained no alternative but to take steps to increase capital accumulation at home, but in general this too could be expected to be difficult. Even if we leave out of consideration a number of matters which we will discuss later, including an anticipated fall in administrative efficiency and, as a part of it, a decline in fiscal capacity, the fall in the productivity of industry and the resulting fall in national income levels could be expected to lower capital accumulation capacity by a corresponding amount. If in these circumstances one were to seek to increase capital accumulation there would have to be special measures for this purpose. What should these be? Further, in such cases some special policy would have to be adopted with regard to obtaining the foreign exchange necessary for imports of machinery, materials, etc.

Thirdly, as regards the conduct of administration, the management of enterprises, etc., there is the matter of the general decline in the administrative efficiency of organizations and mechanisms and in their capacity for management. In the colonial period practically the whole of the important centres of administration was occupied by nationals of the mother country and there was no small number of cases in which everything from decision-making at the highest level down to the basic elements of day-to-day business was dependent on their direction. Consequently, when in such cases as these they were withdrawn from the country in a body, functional paralysis and

decline of efficiency were inevitable. How should the gap be filled? Again, to what degree was it possible to fill it? Unlike the introduction of capital or capital goods this question was one which in general could not easily be solved, involving as it did the introduction of able persons, education, and training requiring long periods, etc. As Messrs T.W. Schultz and A.O. Hirschman point out, no matter how superior might be the machinery, equipment, etc., introduced, if the condition represented by the ability to administer this property were lacking its productive potential could not be fully realized. This is also true of the importation of the institutions of a modern state, and in this sense we may even go so far as to assert that it is this condition represented by the human factor which is the greatest bottleneck in the path of development in the underdeveloped countries. Further, we have here the background against which the so-called technical assistance or technical co-operation problem comes onto the stage, but in what forms are we to expect that such assistance or co-operation will, in the event, find acceptance in the underdeveloped countries? Again, with regard to pure technical assistance or technical co-operation unassociated with the introduction of capital, what can be done, and to what extent? Here we have the third question.

Fourthly, there is the question of deciding the order of priorities in investment. Deciding priorities, in the sense of seeking out a list of priorities which will be the most efficient and rational in economic terms, is by no means an easy matter in the case of the so-called "underdeveloped countries." Further, in this case there is no small number of difficulties in another sense. Leaving out of consideration the cases in which the colony's achievement of independence takes place like the fall of a ripe plum and is accompanied by the coming to power of an internally unified and stable government; in the cases in which it is carried out without due preparation and with the intervention of third forces, the stability of the régime cannot always be depended on. Without stability in the régime in power there can be no planned investment and no establishment of priorities. Again, even supposing that the régime itself has attained stability, in cases in which it stands upon a traditional social equilibrium involving a long-standing balance of regional, class, and racial interests, general principles in investment priorities which would destroy this social equilibrium will scarcely be able to stand. To use Hirschman's terminology, the paramountcy of "group-focused image of change" will prevent this. Consequently, this situation tends to result in the complete absence of economic or investment planning, or else in an unplanned over-all distribution of funds, or budgetary benefactions to all and sundry. Conversely, in the cases in which a powerful dictatorial régime comes onto the stage, excessive and wasteful expenditure of funds on an unimaginable scale will inevitably occur, as in the building of imposing palaces and the construction of stadiums, hotels, etc., for the purpose of demonstrating the power of the régime. How is one to avoid all such states in the economy, draw up efficient investment plans, and take steps to realize them? For this, special work and conditions must be provided.

II. THE SPECIAL CONDITIONS IN THE CASE OF TAIWAN

In the above we have considered, in regard to the newly independent countries in general, the economic situation which may emerge and the problem-points associated with them. In the case of Taiwan there are in addition to such general factors a number of conditions which are of such a nature as to constitute a special burden in economic development.

The first of these is represented by the great population influx from the Chinese mainland, amounting to almost two and a half million persons. The total population of Taiwan was estimated to have risen to 12.04 million in 1964, exclusive of military personnel, as compared with 6.09 million at the end of 1946. Within this period the rate of increase in population was especially marked up to about 1952. That is to say, at the end of 1952 the population stood at 8.13 million, representing a furious rate of increase over the figure for 1946, an increase of two million, or one-third of the pre-existing population, within the span of only a few years. Such a case can hardly be found in recorded history. Further, in the natural course of events the pre-existing stock of capital was inevitably eaten into. This is because, as a result of the rapid rise in population per unit of capital, both marginal and average productivity had to fall as far as the technical condition is the same, but in practice it was difficult to depress levels of consumption to a corresponding degree. Of course, some capital was brought in along with the immigrant population, but much of it could not be put to productive use immediately. The problem was magnified by the fact that by 1949 commodity prices had become inflated by a factor of 290 over 1944, and that even after the currency reform of June 1949, prices still increased by five times during the period 1949-52. The lowering of levels of consumption by inflation cannot be denied, but we have reason to believe that capital was eaten into on a vast scale before reductions of consumption became obligatory.

Further, the series of land reform measures comprising the farm rent reduction to 37.5%, the sale of public farm-land in 1951, etc., may also be regarded as having perforce effects of a similar kind. Land reform has the ultimate effect of increasing the capacity to support population on agricultural incomes by altering the ratio of distribution between the rentier landlord and the tenant, which conversely means the reduction of the rate of capital accumulation through rent as a whole, for the lowering and fragmentation of landlords' rent-incomes pushed up the percentage of their incomes which they consume. The sharp increase in the number of peasant households between 1945 and 1952, an increase of nearly 40% from 500,000 households to 680,000, also makes this course understandable. Eating into capital resources is scarcely to be avoided, at least in the short term, in such cases.

Secondly, there is the high rate of natural increase in the population, more than 3% per annum. The economic implication of this, too, is, in principle, the same as the above; the only difference is that its operation is progressive and continuing, as opposed to sudden. And when it is not accom-

panied by a corresponding increase in capital it tends to lead to the reduction of productivity. Further, it seems that in fact it is by no means an easy matter to contrive to obtain a volume of capital which will cover a 3% increase in population, at least as far as can be judged from past instances in other countries. Again, looking at the proportion of the working age-group (15-59) represented by the non-working age-groups (under 15 and over 60) we find that this increased steeply from 86.8% in 1952 to 100.5% in 1963.¹ This means that it will be difficult to maintain the previous rate of capital accumulation unless the level of per capita consumption is reduced, assuming that productivity per unit of working population remains the same.

Nonetheless we would not seek to deny that, on the other hand, the high rate of population increase may prove a motive factor for economic development in that it includes the possibility of additions of new labour of high capacity and an increase in young labour with the highest elasticity in choice of occupation. Regarding the contribution to economic development of the former we have no need to say anything, but in regard to the latter it may be pertinent for us to make the observation that in fact economic development requires a change-over of industries or the appearance of new industries. In these cases it is the additional supply of plentiful and fluid young labour which will promote such undertakings in the most efficient and rational manner, while this will be difficult if carried out by a change-over of the middle-aged labour force alone. Consequently, we must conclude that there are both advantages and disadvantages in the high rate of population increase, but at the least we cannot deny that it constitutes a condition which makes the accumulation of capital difficult.

Thirdly, there is the burden of military expenditure. The sum involved thought to be 80% of the budget of the Central Government, or approximately 50% of the combined budgets of the Central Government and the Taiwan Provincial Government, and while the exact figures are not public, but judging from the fact that government expenditures are considered to represent 21% of GNP (1956-61), this is estimated at around 10% of GNP. A burden of military expenditure of this order is not uncommon in the other underdeveloped countries, but it need hardly be said that in any case it acts as a restricting condition in relation to their economic development, the standards for which are non-military production. Even if we assume that it is possible that military production will have the subsidiary effects such as the promotion of technical innovation, etc., it need hardly be said that perforce it operates as a depressant on investment for the purposes of economic development.

III. THE STRATEGIC ELEMENTS IN ECONOMIC GROWTH

In spite of the above conditions, there is considered to have been fairly conspicuous economic growth in Taiwan since the war. Although the period

¹ *Taiwan Statistical Data Book, 1966*, Council for International Economic Cooperation and Development, Executive Yuan, Republic of China, p. 10.

from 1945 to 1952 was in fact one of confusion, and we may perhaps suppose that during this period the eating away of capital resources, in the sense which we have mentioned above, advanced to a fair degree, but there is no sufficient source-material which would suffice to verify this. Looking at the period after 1953, however, when the first four-year plan began, we find that in terms of averages for the period 1953-63 real national income rose at the annual rate of 7.1%, that national income per capita, after deduction of the population increase, rose at the annual rate of 3.7%, and that production in agriculture and industry rose by annual rates of 4.4% and 11.6% respectively. Thus the level of national income has exhibited fair rate of increase, accompanied at the same time by the advance of industrialization as a whole, but where are we to seek the causes of this growth, considered in terms of its connexions with the problems stated above?

Firstly, there is the influence deriving from the shutting-off of the existing colonial trade relations which accompanied political independence, but there is no source-material which shows this in clear terms. After 1952, however, when statistical material first becomes available, the economic structure of Taiwan, (which had been exporting rice, sugar and other agricultural products and processed agricultural products to Japan and importing manufactured goods, chiefly consumer goods exclusively from Japan,) certainly changed, and has been changing thereafter from year to year. The trends in these changes have been as follows: agricultural products and processed agricultural products have been declining in importance as exports and manufactured goods have been increasing; consumer goods have been declining in importance as imports and capital goods and raw materials for use in agriculture and industry have been increasing; while among agricultural products in particular the degree of dependence on imports, chiefly imports of raw cotton and wheat, has risen conspicuously. In a word, it is the advance of industrialization that we have here, and perhaps we may regard the market instability following independence as having provided the first impulses towards an economic change-over in this direction. While Taiwan had a surplus of agricultural products at that time, having lost the Japanese market for them, the shortage of consumer goods, chiefly clothing, caused a great rise in the prices of these articles. The lost link with the Japanese market was naturally switched to the continental market, and it is considered that "clothing in Taiwan after war . . . was extremely poor, and as economic relations between Taiwan and Japan were cut off, Taiwan was obliged to depend on the continent for supplies of clothing. In fact, at this time there was a thriving trade with the continent in which Taiwan sugar was exchanged against continental clothing."² But of course this switch could not be expected to be a complete one. With the severe shortage of supply, clothing prices, and consequently the profitability of clothes production, held up, and we may

² "Taiwan kōgyōka no tenkai katei" (Development of Industrialization in Taiwan), Institute Documents No. 40-25, Tokyo, Institute of Asian Economic Affairs, 1965, p. 16. (mimeographed)

suppose that this promoted the successive movements of continental textile capital into Taiwan. Further, when in 1949 the link with the continent was again severed, the filling-out and development of textile capital was spurred on again, thus the textile industry is an example of industrialization sustained by domestic demand, an import substitute industry in the true sense of the word. Further, the position occupied by agriculture, including rice and sugar, in the national economy declined, and if we are to call this the correction of the condition of monoculture, we must regard it as having been produced as a by-product of the change-over of markets. In short, this phenomenon was produced, through industrial development as well as through the contraction of the previous markets for these agricultural products. Further, as regards the establishment of industry, including the textile industry, as we will show later, tariff and import restrictions and other powerful policies of protection and encouragement were adopted. Inasmuch as there was a strong potential domestic market for consumer goods, based on the relatively high consumption standards which had previously prevailed, the protectionist policies were able to meet with a fair measure of success in stimulating domestic production. It was not a simple case of preventing "colonial profits" from leaving the country and pressing forward with industrialization by reinvesting these. In the process of attaining independence the "colonial profits" tended to disappear, and this in itself promoted a change-over from the monoculture system. The basis of this change-over is to be found in the scale and structure of the market in the relevant country. In the case of Taiwan, not only did substitute production by domestic industry, centred on consumer goods, advance as a result of the import difficulties, but as a result of the contraction of former export markets and the increase in domestic demand the position of rice and sugar in the exports of Taiwan suffered a relative decline and in their place exports of manufactured goods, such as textiles and cement, began contemporaneously with the establishment of import substitute industries. In any case we must here take notice of the importance of the shutting-off of the previous colonial trade relations as being the occasion for the promotion of industrialization.

Secondly, and in connexion with the above, there is the question of the manner in which capital formation took place. In the light of the conditions pertaining to Taiwan itself as stated above, the difficulty of capital formation is clearly apparent. In this regard we must first point out the importance of the American economic aid which had been established and strengthened against the background of the outbreak of the Korean War in 1950. In the form of machinery, materials, raw cotton, wheat, etc., the American aid amounts to an aggregate value of \$115.5 million over the years 1951-61 alone, and the meaning of it is to be found in the fact that it occupies more than half of the capital formation of Taiwan. In regard to this point Mr. K. Y. Yin said the following in the course of a lecture in which he reviewed the economic growth of the 1950's. "...The ratio of net domestic capital formation to national income...for Taiwan...is 14.4% which compares

favourably with that of other countries. However, this would be reduced to only 6.3% if capital from external sources (i. e., U. S. foreign and overseas Chinese investments) were excluded.”³ Consequently, “... if there were no U. S. aid, our rate of growth would have been much smaller. In fact, with population growing at 3.5% per annum, real per capita income would decrease!”⁴ And in fact between 1950 and 1959 Taiwan was one of the countries which received most foreign aid when measured in per capita terms. The figure in question was \$8.56 per capita,⁵ coming after Laos, South Viet-Nam and Republic of Korea, and the situation has been that the deficit from year to year in the international balance of payments equivalent to more than 5% of GNP or to between half and one-third of imports has been met out of this aid. This means that if for some reason the international environment in which Taiwan is placed had undergone some change and Taiwan were not receiving this American aid, both the capital formation rate and the economic growth rate would of course have been lower, and the technical processes in its development would have been a good deal different, having lower rates of dependence on foreign technology and imported machinery in greater or lesser degree. Again, if it had been considered necessary to take steps to increase exports for the purpose of introducing foreign technology, the industrial structure, including agriculture, must of necessity have become all the more centred on the export market and consequently from the point of export policy, too, it would probably have been found necessary to employ additional special measures. The correction of monoculture, at least in the above-mentioned sense and historical context, may be expected to have been difficult, and on the contrary a temporary strengthening of monoculture may even have been considered necessary. Any steps taken in this direction would inevitably have been in the face of low prices. Thus we are obliged to conclude that the role of American aid in capital formation in Taiwan was decisive.

But what is the situation with regard to the net domestic capital formation? In a word, alongside private enterprise capital formation a species of public capital formation has been forcefully carried out through the medium of taxation, state monopolies, public undertakings, etc. The process of these capital formation is not so simple. The proportion of gross fixed capital formation accounted for by investments by government organs and public undertakings is approximately 50%, and is on a par with investment by private enterprise. The government expenditures which provide the backing for the former of these two types of investment represent 21% of GNP, within which 16% is derived from normal revenue and the remainder from American aid or the issue of government bonds, while within normal revenue 17% is derived from the state tobacco and alcohol monopolies, 22% from public

³ K. Y. Yin, “Economic Development in Taiwan: Record and Prospects,” *Industry of Free China*, Vol. XVII No. 1 (Jan. 1962), p. 19.

⁴ Yin, p. 20.

⁵ United Nations, *Economic Survey of Asia and the Far East*, 1961, p. 49.

undertakings and public property, and 61% from taxation. Further, two-thirds of the tax revenue comes from tariffs, commodity taxes, and other indirect taxes.⁶ As regards content there are many among these taxes, which are of the nature of taxes on the masses. It need hardly be said that the revenue from tobacco and alcohol is essentially of this nature, while there are also many public undertakings in electricity, fertilizers, sugar production, etc., which are of a monopolistic character, and the revenue from these inevitably partakes of such a nature in greater or lesser degree. Again, while capital resources were eaten into by the society as a whole—or perhaps one should say, “mainly by households”—especially during the period of severe inflation up to about 1949, the restoration and filling-out of investments by these government organs and public undertakings was carried out in a fairly positive manner, and this in itself may be thought to have been in part a cause of the inflation. In any event, it is considered that compulsion and semi-compulsion in a variety of forms provided the basic conditions for capital formation through the medium of government organs and public undertakings. Again, in the case of the question of the distorted price ratio between rice and fertilizers, to which attention is frequently drawn,⁷ we would seem to be called upon to say that this possessed the function of indirectly promoting capital formation on the basis of state enterprise, in that it proved possible to distribute fertilizers to agriculture at two or three times the import prices while maintaining the price of rice purchased by the government for export at relatively low levels. These state monopolies and public undertakings were mostly taken over as inheritances from the period of Japanese rule, and it cannot be denied that the existence of those inheritances constituted a condition facilitating public capital accumulation in both technical and institutional terms. In this sense it may be appropriate for us to regard this case of Taiwan as being an instance in which it proved possible, in ways peculiar to the nature of the case, to ensure the retention and reinvestment of the “colonial profits” as previously mentioned.

We may add that with regard to private enterprise capital formation, attention should be drawn to the fact that on the whole the case of Taiwan is characterized by the adoption of an open door policy in relation to foreign capital. The ECAFE Annual Report says that “China (Taiwan) encourages foreign equity participation in most import-substituting and export industries except in sugar (an export industry) and petroleum (an import-substituting industry) which are run as state monopolies.”⁸ And in fact in 1954 steps were taken to promote foreign shareholding by passing a law about the investments of foreigners, and in particular as regards the promotion of the

⁶ *Taiwan Statistical Data Book*, 1966, p. 98.

⁷ Takeharu Sasamoto ed., *Taiwan no sangyō kōzō* (The Industrial Structure of Taiwan), Research Materials No. 59, Tokyo, Institute of Asian Economic Affairs, 1964. “Kome no keizai kōzō” (Structure of Rice Economy), Institute Documents No. 40-28, Tokyo, Institute of Asian Economic Affairs, 1965. (mimeographed)

⁸ United Nations, *Economic Survey of Asia and the Far East*, 1963, p. 73.

return-flow of overseas Chinese capital steps were taken to secure preferential treatment with regard to taxation, site acquisition and so forth after the promulgation of the Investment Regulations of 1955. As a result, the proportion of aggregate imports of goods and services occupied by foreign private investment was categorically higher than in the other countries of Asia.⁹ As regards the influx of private capital, there must of course be some anticipation of profitability and some prospects regarding the safety of the investments, further the adoption of an open door posture by the recipient country, Taiwan, stands out when considered in the context of an international environment in which there is no small number of countries which have prohibited or restricted the introduction of private foreign capital. Taiwan is similarly "open" on the technical co-operation side, and the technology of America, Japan, West Germany, England, France, Holland, etc., is flowing into Taiwan along with the capital of these countries.¹⁰ In this sense Taiwan could be said to be the country which has discarded in the most thoroughgoing manner the closed character of "monopoly." Therefore, it cannot be denied that this has contributed to making business activity by private enterprise all the more brisk.

Thirdly, however, it should be noted that as a precondition for this activity above-mentioned, investment has been carried out efficiently, particularly as regards public plans.

(1) From the point of view of the actual distribution of investments, the proportion of total investment invested in the transportation, telecommunications, irrigation and flood control and other departments of the public sector, was comparatively small, while that invested in the energy industries and iron and steel was relatively large. This course involves thoroughgoing and intensive utilization of both existing social overhead capital and external economies with a view to lowering costs on that side; and in Hirschman's terminology, again, this represents a circumspect and conservative attitude to SOC (social overhead capital) investment, which is apt to run to over-investment; and in so far as SOC did not become a notably restricting factor it would seem proper for us to regard the investment programme as having been a success. By reason of their technical characteristics intensive and efficient utilization of roads, railways, harbour installations, telegraphs, telephones, irrigation and drainage installation, etc., was possible within a certain range without any additions of capital. The inheritance from the period of rule by the Japanese made this possible, as was also the case with regard to the introduction of the institutions of a modern state and the full range of educational and health services, etc. The size of the existing capital stock, if any, with respect to these could not but be one of the conditions controlling the economic development of the newly independent country. It is nonetheless true that of necessity there was a certain limit to the utilization of Taiwan's existing social overhead capital above which new investment would

⁹ United Nations, *Economic Survey*, 1963, p. 12.

¹⁰ Sasamoto ed., *Taiwan no sangyō kōzō*, pp. 216-222.

be necessary. It is said that it was when the third four-year plan began in 1961 that for the first time work began in earnest on social overhead capital investment, including housing construction. However, we must consider as of great significance the fact that in one way or another it had proved possible to economize on investment for these purposes up to that time.

(2) Under these conditions, Taiwan has consistently taken up electricity, fertilizers, and sugar as the main objects of industrial investment since the time of the first four-year plan, and has run these as public undertakings. As these undertakings were among the expropriated Japanese assets, they were run for profit; besides, we can take the view that an extremely strategic way of running them was employed, considering their role as the so-called leading sector in economic development. That is to say, from the first public undertakings are characterized by the possibility of carrying out intensive, large-scale investment flexibly and regardless of short-term considerations of profitability. First of all, as regards electricity, throughout the 1950's huge sums, mainly American aid, were invested, and electricity generated increased by three times between 1952 and 1962, reaching the highest level of electricity generated per head of population among the countries of Asia, Japan excepted. Moreover, as a low price policy had been adopted, electricity charges were low by international standards, as the ECAFE Annual Report points out,¹¹ and consequently we may suppose that as a supplier of low-cost motive power the electricity industry acted as a motive factor in the development of industry, particularly in the fertilizer industry, which uses much electricity, and also in such industries as aluminium, iron and steel, and cement.

As transport costs tend to be a major cost element in the fertilizer industry, it generally pays to carry on production as sites near to the places where the commodity is consumed, even if other costs are somewhat higher as a result. In the case of Taiwan, fertilizer production rose steeply from about 1955 as a result of the monopoly of imports, and also because, as we have already noted, domestic prices were maintained at two to three times the import prices. By 1964 Taiwan had become capable of supplying 80% of her domestic fertilizer requirements, which were considerable in view of her need to restore and increase the production of rice, sugar, and other crops. Inasmuch as Taiwan had hitherto been importing 80% of the volume consumed (inclusive of fertilizers bought with American aid and amounting to around 15% of the value of imports in 1950-52), this has had great significance for Taiwan as a saving of foreign exchange by means of import substitution, and again, as far as the industry itself was concerned, it may be regarded as having prepared the ground for the development of synthetic resins, synthetic seasoning materials, pharmaceuticals and other related chemical industries. In the underdeveloped countries as a whole, though the chemical industry requires large sums of capital, it can be comparatively easily established, since from the technological point of view the equipment used in it requires the training of only a small number of technicians. In

¹¹ United Nations, *Economic Survey*, 1963, p. 44.

addition, we can take the view that in the case of Taiwan what we may call an important foundation-stone was laid in the form of public undertakings. Further, in this case, too, American aid was a great support.

Next, the sugar industry is also a strategic industry charged with an important role in the obtaining of foreign exchange. Although the percentage of aggregate exports accounted for by this industry fell steeply from 1960, in the 1950's it was more or less consistently over 50%. The high level of sugar production and exports in the 1950's were made possible only by the vigorous measures taken after the sharp decline in production in 1946, when output fell sharply as a result of reduced cane-growing, damage to plants, etc., reaching the level of only 30,000 tons, with the consequent loss of the traditional privileged market in Japan. In this situation the Taiwan Sugar Company was charged with responsibility for the restoration of production, and the methods employed were increased investment in cane-growing and refining, the improvement of productivity by this means, and the buying-up of peasant home-made sugar at prices which would make export possible. Along these lines the sugar-allocation system and the fixed purchase-price system¹² were adopted. These systems might be considered made possible only on the presuppositions of monopoly and compulsion by public undertakings.

(3) In addition to the above three industries, the number of public undertakings, in the form of expropriated enterprises formerly run by the Japanese, remained high until about 1947, but to offset the cost of the land reform four public companies, the cement, paper, mining, and agriculture and forestry companies, were sold off to private enterprise, and progress was made in transferring to private enterprise those public companies which were inefficient. At the same time, with respect to private enterprise firm steps were taken by every possible means to protect and nurture domestic industry with the help of such measures as preferential policies for raw material imports effected by means of import restrictions, high tariffs and exchange controls,¹³ and as a result there were not a few cases in which import substitution advanced rapidly and an entry to the export market made within a short period. These were the cases of textiles, cement, monosodium glutamate, plate glass, and plywood.

In this way the industrialization of Taiwan is being advanced in a fairly thoroughgoing planned manner over the fields of procurement of capital, choice of investments, nurturing of private firms, etc. Fourthly, therefore there arises the question of whence this planning orientation is derived. As regards this orientation, one actually concerned in it has the following to say. "During the past decade of development, the Chinese Government has always assumed the necessary leadership in planning, programming, encouragement, and protection. Indeed, if the Government had left everything to the initiative of the private sector, we could not have achieved as much as we have in the development of our economy."¹⁴ As well as being a question

¹² "Taiwan kōgyōka no tenkai katei," pp. 11-15.

¹³ United Nations, *Economic Survey, 1963*, p. 46.

¹⁴ Yin, p. 24.

of the existence of a powerful government which can draw up plans and carry them into effect this is a question of the capacity for efficient administration. As regards this point we must draw attention to the powerful and lavish American economic aid and the new order in administration which was established when the Central Government moved its seat to Taiwan. The former of these, economic aid, is indeed complex as regards its financial resources, methods, scale, etc., but its characteristic is that fairly strict conditions and limitations were attached to the manner in which it was used. We have already mentioned how public undertakings such as electricity and fertilizers were supported by huge sums of economic aid, and it is considered that over the public undertakings as a whole 60% of investment was due to American aid. As a matter of course in the case of the so-called project type assistance and also in the cases of non-project type assistance and agricultural surplus aid, the ways in which counterpart funds may be used are strictly and minutely specified,¹⁵ and further this exercises a controlling effect over all the investment plans in which such aid is included. It would seem that it is here, basically, that the basis of economic planning in Taiwan is to be found. As regards administrative efficiency, an improvement is reported in the period dating from 1950, following the entry into Taiwan of government officials from the continental administration, and such things as "the presence of high-grade technicians and administrators who have come into Taiwan from the continent—in particular the government economists who have studied abroad, are proficient in English, and of great advantage for the administration of American aid" is cited as one of the "conditions which has made American aid effective."¹⁶

It is of course true that it is difficult to avoid planning and control being accompanied, in the natural course of events, by disadvantages which are peculiar to the nature of each. In this connexion the capacity for efficient administration itself is criticized by Mr. Yin on the grounds that "Our administrative efficiency is still short of the level that meets the needs of modern industry and business. Our public functionaries in direct contact with the people still lack the ability of administering laws and even the understanding of the spirit behind them."¹⁷ And attention is also drawn to such problems as the lack of entrepreneurial spirit, and the weakness in international competition of firms which are used to government protection. Again, attention is drawn to friction and questions of domination and submission between the aiding and the aided country. Even so, for a newly independent country the economic planning of Taiwan, considered as a whole, has been remarkably free from confusion and failure, and we are obliged to say that it has been smoothly drawn up and carried into effect.

¹⁵ "Taiwan no keizai kaihatsu to Amerika enjo" (Economic Development of Taiwan and the U.S. Aid), Institute Documents No. 41-5, Tokyo, Institute of Asian Economic Affairs, 1966, pp. 23-32.

¹⁶ *Ibid.*, p. 103.

¹⁷ Yin, p. 25.

Lastly, we have frequently touched above on the matter of the inheritance from the period of rule by the Japanese, but this is not confined to material assets and institutions. A people industrious in the sense of knowing that "the results of one's efforts will be paid back to one" and highly enlightened—this is something which we must not overlook. It is this which was nurtured and strengthened in the process of the introduction of a capitalist economic system under the rule of the Japanese, but as regards its roots it may perhaps be necessary to go back still further into the past. In any event, the existence of such an industrious and educated people is the basis of the economic development of Taiwan. Since independence the levels of education and training have continued to rise, reaching levels of education and training which could not have been attained overnight.

Many problems in the economic development of Taiwan remain for the future, in particular the question of how the effects of the termination of aid in 1965 are to be dealt with, but we can take the view that as far as economic growth to date is concerned, results of a fairly high order have been achieved. We may perhaps cite factors such as those which we have discussed above as having constituted the socio-economic conditions which made economic growth possible under these difficult circumstances. To repeat, we find herein conditions which are capable of being patterns for underdeveloped countries in general, while at the same time there are also historical, social, and international conditions peculiar to Taiwan which can scarcely be taken as models without maturer reflection. Considered as a case study, it may be necessary to make more accurate distinctions among, and analyses of, these conditions. In the present article we have merely attempted to present a broad framework within which such analyses might be undertaken.