A second strategy was to introduce new tax incentives. In September 1960 the government exempted recipients of interest earned from time deposits of two years or longer from paying any income tax. Then in January 1971 the government passed legislation exempting recipients from paying any tax on interest income from the following sources: trust funds in accounts for two or more years; monthly savings deposits or postal savings in accounts for a year or longer less than NT$1,200 a month; savings deposits for tax payments; and construction savings debentures maturing after three years. Again on January 1, 1981, the government made it possible for recipients of interest from other kinds of income sources to be exempt from paying tax: postal passbook savings and short-term commercial paper; income from trust funds that constituted a real savings fund; and dividends accruable on registered share certificates publicly issued and listed by company, if total amount of deduction for a year came to less than NT$360,000.

The government also created new incentives for businesses to invest. In September 1960 the government had passed legislation designed to encourage greater investment. Such tax benefits included the following: five-year tax exemptions or accelerated depreciation of fixed assets; investment credits ranging from 10 to 15 percent; preferential rates on firms' income taxes ranging from 22 to 25 percent; and reduction of up to 15 percent of money paid for acquiring share certificates in the consolidated income tax in any current year. As already mentioned, exporters also began receiving tax incentives when purchasing raw materials from abroad and importing machinery for producing for export.

When we estimate the total tax exemptions for business investment, we arrive at a figure of roughly NT$1.5 billion for the period 1961–80. Of this amount, about 38.1 percent represented business tax exemptions, and 37 percent represented income tax exemptions. The total tax relief for exports, those refunds of taxes and duties paid for imported raw materials, came to NT$249.6 billion or 39 percent of total tax receipts from 1955 to 1980. Of export refunds, customs duties made up 61.7 percent and commodity taxes another 27.5 percent. All this represented a great loss of revenue for the government, but it is more than likely that the incentive given to businesses to undertake more investment and expand

Table 6

Overseas Chinese and Foreign Investment

(US$1,000)

Period	Overseas Chinese Value	Overseas Chinese Percent	Other Foreign Value	Other Foreign Percent	Total
1952–64	36,150	38.8	56,956	61.2	93,106
1965–70	126,866	27.2	339,258	72.8	466,124
1971–75	247,315	29.2	598,702	70.8	846,017
1976–81	593,819	34.7	1,115,094	65.3	1,708,913
Total	1,004,150	32.2	2,110,010	67.8	3,114,160

Source: Investment Commission, Ministry of Economic Affairs, Statistics on Overseas Chinese and Foreign Investment, Technical Corporation, Outward Investment, Outward Technical Cooperation, The Republic of China, December 31, 1984, p. 5.

sales generated more tax revenue than was lost from state coffers.

And what of foreign investment? The government had drafted laws for foreign nations to invest in Taiwan as early as July 14, 1954, and these were amended on December 14, 1959.[39] These laws encouraged foreign investment to locate in Taiwan and made it possible for the investor to apply each year to remit foreign exchange to his home country. Article 12, for example, stipulated that the investor could apply for any amount up to 15 percent of the total sum invested. Such application could only be made two years after government approval of the original investment plan. But even that 15 percent share could be raised if the government approved, and such approval largely depended upon the available foreign exchange reserves.

Did foreign investment in the Republic of China grow rapidly during the transformation period? The answer is yes—according to table 6, in the years 1965–70 alone the total amount of capital inflow exceeded that for the 1952–64 period fivefold. In fact, foreign investment rapidly climbed during the 1970s, with overseas Chinese capital accounting for roughly one-third of the total amount.

Government policies to channel resources into modern factories, especially for export, also periodically took place. For example, in 1957 the government encouraged leading manufacturers to pool their funds and, with some American capital, built a new plant in Miaoli to produce synthetic textiles.[40] With capital of around US$1 million, the Artifical Fiber Corporation became the first producer of synthetic fibers in Taiwan. Other firms followed, and this industry eventually became a leading export earner.

The government then set up an export-processing zone in Kaoshiung in 1966 and two more at Nantze and Taichung in 1969.[41] Occupying only 180 hectares of land, all three offered their joint-venture, foreign and Chinese firms exemptions from import tariffs, commodity taxes, a five-year corporate tax holiday, and low-cost loans to build factories without deed taxes. Although 110 factories had closed their doors between 1967 and 1970, new applicants totaling 262 still produced for export. They attracted US$280 million worth of investment by 1979, but only 12 percent of that came from Chinese firms. These zones ultimately produced electronic components, machinery, precision optics, plastics, leather, clothing, and leisure goods. Of the nearly 80,000 people they came to employ, 60,000 were women housed in modern multi-story dormitories near the factories.

Another government scheme, launched in July 1979, was designed to create a 210-hectare park only forty-five miles southwest of Taipei, in Hsinchu, for Chinese and foreign high-technology firms. Located near several major universities and institutes, the park is supposed to operate as a bonded, duty-free area with a computerized inventory control system rather than a physical wall at the boundary.[42] The park immediately took applications from firms to make minicomputers, integrated circuits, and laser optics. In this way the park, like the export-processing zones just described, began to channel new resources and technology into new product lines that are now revolutionizing all sectors of Taiwan manufacturing.

Finally, there were policies for promoting economic equilibrium. These policies can be divided into two groups by reason of the kind of economic equilibrium to be achieved. The first group of policies related to plans and spending to bring the economy's infrastrucure in line with the expanding market economy supporting the private sector. A variety of public goods and services usually are supplied to any economy by public organizations: energy, transportation, communications, education, etc. In the early 1970s government economic planners already had observed

that the private sector's rapid growth and demands were outstripping the supply of public goods and services. Unless the infrastructure was improved, critical bottlenecks could very well impede the activities of private enterprise and choke off the development underway.

In 1974 the government initiated the Ten Major Development Projects for completion by 1979.[43] The government viewed these projects as necessary because private investment during the 1963–72 period had outpaced public investment for infrastructural development. These projects involved building a north-south freeway, electrifying the railway system, constructing a new international airport, establishing a nuclear power plant, constructing an integrated steel mill, opening a giant shipyard, and building a naphtha-cracking plant for the state-run Chinese Petroleum Company, as well as expanding the productive capacity of existing petrochemical firms. Immediately upon completing these projects in 1979, the government announced that twelve more such projects, costing around US$7 billion, would be completed by the end of the 1980s.[44]

The second group of policies designed to achieve economic equilibrium were monetary and fiscal policies that the government used from time to time to stabilize economic activity in order to prevent severe inflation or recession. These policies followed the conventional monetary and fiscal tools used by Western economies but with some differences. Some examples can elucidate these practices.

As the Republic of China became more dependent upon foreign trade in the 1960s, it became increasingly more difficult for the single, fixed exchange rate to accommodate the rapid changes in value of other foreign currencies, a situation that became more acute after the mid-1970s. Taiwan traders encountered very unpredictable costs whenever the value of foreign currencies shifted wildly. Therefore, in February 1978 the government introduced a managed-floating exchange rate. The Central Bank now buys and sells key currencies like the U.S. dollar to allow the exchange rate for the NT$ to shift within a narrow band of exchange-rate values. Such pegging helped minimize unexpected costs for Taiwan traders.

Another difficulty the government faced as the island economy became more trade-dependent was the volatility of the money supply. When export surpluses mounted and exporters earned huge profits, depositing these in Taiwan banks, demand deposits abruptly rose and the money supply jumped. The opposite effect took place if traders suddenly reduced their demand deposits. The government has designed some procedures to prevent such large shifts in the money supply that might adversely spark inflation or recession. It has raised the reserve requirements for savings deposits, issued new treasury bills to be purchased by banks, sold foreign exchange to banks, suspended short-term capital inflows, and allocated foreign exchange to traders for importing consumer goods and intermediate products for industry. All of these steps were made cautiously and with prudence. Therefore, the government continually intervenes in money markets in order to stabilize the value of different forms of money.

Ever since the great post–World War II inflation, Taiwan's government has been determined to use instruments at its disposal to influence interest rates. In order to reduce the real rate of interest and promote capital investment, the government has taken vigorous steps to curtail expenditures and induce higher savings. Therefore, government-controlled banks have invariably offered very high interest rates for bank deposits to attract funds into bank time deposits. This tactic proved very successful in the early 1950s, and it has been used frequently ever since. When the oil crisis struck Taiwan in 1973 and sent inflationary shockwaves throughout the island, the government quickly responded by raising the interest rate on one-year savings deposits from 8.75 to 15 percent between July 1973 and January 1974. This sudden hike within only six months brought a tremendous cashflow into banks and helped to curb inflationary spending.

As for fiscal tools, the government has used these as incentives to direct resource flows whenever it deems necessary. We have already cited the example in 1959 of the government raising indirect taxes to cool inflationary pressures. In 1960 and subsequent years tax rebates were given to manufacturer exporters to stimulate their activities. Selectively applied tariff increases and reductions also have been used to curb or promote imports depending upon the economic conditions that prevailed. But built-in stabilizers like the progressive income tax and transfer payments

have not yet become important, nor will they likely be for some time to come. Income taxes make up a small share of total revenue, still only accounting for around one-third of all tax revenues in 1981.[45] Transfer payments also are very small as a share of total government spending.

The governmental agencies for coordinating the policies just described did not take form all at once. The primary institution guiding Taiwan's economic planning from the mid-1960s to the early 1970s was the Council for International Economic Cooperation and Development (CIECD), established in 1963 in the face of gradual withdrawal of U.S. aid. The CIECD was a centralized development agency that amalgamated the Council for U.S. Aid (CUSA) and three planning groups (industrial, agricultural, and communications). It was originally charged with the formulation, integration, and coordination of economic development plans and negotiations for external financial and technical assistance.

This institution was reorganized into the Economic Planning Council (EPC) in 1973, and its functions somewhat decentralized. With the outbreak of the oil crises in the 1970s, however, the changing economic climate demanded more potent and effective tactics than the EPC could provide, and a unique forum for economic policymaking evolved in Taiwan: the Financial and Economic Committee (FEC).

It was convened in January 1974 by the then governor of the Central Bank of China, Kuo-Hwa Yu. The FEC was a remarkably informal and flexible policymaking group. The members included the minister of economic affairs, the minister of finance, the chief comptroller, the secretary general of the Executive Yuan (Cabinet), and the governor of the Central Bank who served as convener. Each week from 1974 through 1977 this committee met over breakfast to discuss policies coordinating the interests of the financial, economic, monetary, agricultural, and industrial sectors of the country. No minutes of these meetings were kept nor were any memos ever written, but each Friday the committee would make policy recommendations directly to the premier. While the FEC was in charge of policy, the EPC continued in its planning role. The two functions were merged in 1977 by the creation of the Economic Planning and Development Council, a super-ministry level organization headed by Yu. The other members of the former

FEC continued as members of the Economic Planning and Development Council.

This short review of government policies shows that the state has intervened to influence the private sector in many ways. But such policies are designed to nurture private enterprise and not impede its activities. Government officials and planners are convinced that the marketplace cannot provide adequate signals all the time for actors to respond in the best interests of society. Because the government also has the responsibility for national defense and for improving the welfare of the people, its economic policies often appear to be interventionist in the market and ill-suited to serve the interests of business. Many instances have also arisen whereby the government has been asked to provide subsidies for firms that have gone bankrupt, but the government has generally refused to bail out firms except in the case of large-scale public enterprises. Therefore, when difficult economic times struck, many business failures occurred. Furthermore, many critics of government have long held that the economy should be more open, like the free *entrepot* economies of Singapore and Hong Kong. But the government has resisted such moves, because national security concerns dictate that some surveillance and checks must still be exercised upon private parties that want to enter and leave Taiwan. Here too the government has tried to strike a balance between the demands of those running the defense establishment and the businessmen eager for more freedom to trade in the international market.

The Private Sector. Taiwan enterprises are predominantly small and medium-sized, operated by a single proprietor or family. Some large companies like Formosa Plastics exist, but the simple fact is that we do not find great conglomerates like Hyundai or Samsung as in South Korea. For example, as of mid-1983 the Hyundai and Samsung corporations had annual sales of US$8.0 and $5.9 billion, respectively; assets of US$6.0 and $4.6 billion, respectively; and employed 137,000 and 97,384, respectively. But Formosa Plastics, the Republic of China's largest privately owned corporation, lagged far behind with annual sales of US$1.6 billion, assets of US$1.7 billion, and a workforce of 31,211.[46]

The government does own and operate large firms to produce steel and build ships, but these are special cases. The small-scale enterprises in Taiwan are characteristic of Chinese society, and the same features exist in Singapore and Hong Kong and had long operated on the mainland before the period of Communist rule. This structural feature might very well explain why markets are so open and competitive on Taiwan. For indeed that is the case. Numerous enterprises emerge and fail every day. As one would also expect, we tend to find cutthroat pricing practices everywhere. Firms are price takers rather than price makers. They try to keep their unit costs low while expanding sales either at home or abroad. For these reasons, then, few private firms can spend very much for research and development, and consequently the Republic of China has a very low rate of R&D expenditure. Technical creativity under these circumstances is rare. Firms obtain their new technology by imitating their competitors, especially the foreign multinationals that have located on the island. Technical diffusion becomes very rapid because entrepreneurs imitate their domestic rivals, or they learn the newest state of the art from foreign firms.

As an example of imitating rivals, in 1957 the government wanted to promote plastics, and so officials persuaded Y.C. Wang, a successful businessman in his own right, to set up a factory. After several years of lackluster success, Wang finally reduced unit costs and began producing for export. Then three other businessmen without any experience in plastics quickly followed suit and built similar factories; others also entered the industry. In 1957 only 100 small firms had fabricated products from plastics supplied by Wang, but in 1970 more than 1,300 small firms purchased from the few major plastics suppliers.

Before 1960 the electronics industry did not exist, but by 1978 over 1,000 Chinese firms produced nearly 10 percent of the value of manufacturing and exporting as well. By 1983 the export value of electronic products exceeded that of textiles, giving it first place in Taiwan's manufactured exports. Again, small and medium-sized firms predominated, with half of them earning less than US$9.4 million each year. They only spent 0.4 percent of their sales on R&D compared with 8 percent in Japan and 5–8 percent in the United States.[47]

Still another case of rapid industrial growth is that of man-made fibers. The first such firm, the Artificial Fiber Corporation, began operating in 1957 with a daily capacity of four tons of rayon filament fiber. Many other firms followed suit, in nylons, polyester, and acrylic fibers in the 1960s.[48] Their growth was tremendous. In 1957 only 738 tons of such fibers were produced on the island. By 1968 a variety of such fibers was being produced to the amount of 32,580 tons, and about three-quarters of it exported. Such industries as canned pineapples, mushrooms, and other processed foods; shoes; leather; plywood; etc., sprouted up in this same period. Again, firms in these industries were small, labor-intensive, and oriented toward export.

Foreign enterprise was another important source of new technology. Between 1961 and 1970 the net long-term capital flow into Taiwan had more than doubled, and between 1970 and 1980 it rose another eightfold to make up 9 percent of total investment during that decade.[49] While part of that funding went to the new export-processing zones, all foreign investment accounted for around 4 percent of the value added in manufacturing, around 20 percent of exports, and 10 percent of manufacturing employment. In the 1950s overseas Chinese capital came to Taiwan, followed by Japanese and U.S. capital in the 1960s, with more of the same in the 1970s but augmented by European capital as well. From these foreign enterprises Chinese businesses obtained much valuable technology.

Foreign technology has entered the country through other avenues as well. In 1982 Taiwan exported US$1.8 billion worth of computer components, about 9 percent of exports for that year. One of these, personal computer boxes (PCB's), is now produced by a flourishing grassroots industry.[50] Several managers and technicians who had once worked for Ampex Taiwan, a subsidiary of U.S. Ampex, left to set up their own PCB factories. This new industry spread rapidly. PCB firms now turn out other components as well, at costs 30 percent lower than their counterparts in the United States. These same components have been widely used in the computers that have been under-selling their competitors abroad.

Borrowing from multinationals was still another means. The Singer Sewing Machine Company set up a factory in 1963 with

capital of US$800,000. The government approved this investment because it hoped Singer's investment would replace sewing machine imports, save foreign exchange, and stimulate local industrial growth. That it did. By 1967 Singer's exports used all locally made parts except needles for its straight stitch model.[51] In the 1960s Singer's exports grew at 12 percent per annum, and by 1976 it exported 86 percent of its total output, with about four-fifths of that locally made. In addition, the company trained workers, held seminars, and provided standard blueprints to its parts producers. Singer did all this because it wanted to ensure that native firms adhered to its rigid specifications and that it cultivated goodwill with the authorities. Foreign firms like Singer used more foreign technology than their native competitors, but very soon much of that new technology had filtered down to other Chinese firms.

Just as small firms dominated the manufacturing sector, so too did small establishments proliferate in services. Between 1965 and 1973 the annual growth rate of labor leaving agriculture and never returning averaged 4–5 percent.[52] In this eight-year period the migration from the rural sector was the most rapid in Taiwan's entire economic history. Perhaps nearly half of the population of the Pescadores in the 1950s migrated to Kaohsiung city and environs in the transformation period. Although many of these new arrivals to the cities indeed found work in manufacturing, the services sector probably provided the greatest amount of employment.

Any visitor to Taiwan's large cities can only be amazed at the intense competition in services and the vast number of small shops, street vendors, and taxis. Competition among these units is fierce at all times; some prosper and others fail. Few ever become really large and incorporate, although some modern department stores now flourish in every major city. In 1982 the services sector employed 40 percent of the workforce and produced nearly half of the net domestic product. The economist Shirley Kuo found that the growth rate of value added in services was nearly as high as that of manufacturing between 1957 and 1981.[53]

Not surprisingly, small enterprises employ most of the workforce in services and generate most of the wage income. In the mid-1970s the firms in the commercial sub-sector of services having fewer than nine workers employed 70 percent of the workers and produced two-thirds of the wage income for that subsector.[54] Services are strongly linked to the other sectors, for their sales and revenue greatly fluctuate in response to economic conditions in industry and agriculture.

Although more land is now cultivated than in 1952 and the number of farm families in 1982 (803,819) exceeds that of 1952 (679,750), agriculture's share of exports (18.9 percent) and of the net domestic product (9.2 percent) was at a far lower level than it had been in either 1952 or 1965. Family farms now obtained only one-third of their income from farming compared to over two-thirds in the early 1950s. About nine out of ten farm households now work on a part-time basis whereas in the 1950s the number was around five out of ten farms.

In 1982 the total amount of paddy and upland land farmed was equivalent to that of 1965. In other words, although land cultivation continued to grow during the transformation phase, the high point had been reached in 1977, and thereafter land cultivation steadily declined.[55] Multiple cropping greatly increased along with crop yields. While farm output matched consumer demand and some produce was processed and even exported, the demand for food slowly declined. Rice consumption was only 96 kilograms per capita per year in 1982 and is expected to decline by 1.8 kilograms each year over the next decade.[56] By the mid-1970s the government began introducing subsidies to farmers. In the early 1980s the government was paying rice farmers (in kind) the cash equivalent of US$370 to $506 per hectare not to grow rice; this subsidy was costing the government millions of dollars each year.[57]

Government programs to support agriculture were varied and heavily funded. The Joint Commission for Rural Reconstruction (JCRR) began its work in 1950, and between 1950 and 1965 spent NT$4 billion on some 6,200 projects to provide farmers with new technology, information, and infrastructure.[58] This innovative administrative organ competed with the government's Department of Agriculture and Forestry, and sometimes their services overlapped. But the flexibility provided to the JCRR gave it more leverage to act with farmers in different regions and to lend more speedy assistance when needed. Government policies to encourage family

farming continued through the transformation years. Some policies, however, definitely imposed a heavy burden on farmers while they assisted certain income groups living in the cities and working for the government, namely the civil service and the military.

One notable policy was the rice-fertilizer barter system, initiated in 1950, and finally phased out only during the early 1970s. In the early 1950s the government imported fertilizer from Japan and supplied it to farmers' associations, which in turn sold it to farmers in exchange for rice.[59] In those years farmers welcomed the scheme because fertilizer applications generated a high marginal output increase that yielded lucrative benefits at the fertilizer-rice barter ratio set by the government. But two new conditions wiped out these benefits. First, Taiwan developed its own fertilizer industry, and prices fell even lower than imported fertilizer. Second, the incremental output increase from fertilizer slowed down. As a result, farmers began to incur financial loss under the terms of the old fertilizer-rice exchange. Moreover, this system provided a powerful incentive for farmers to apply fertilizers only to rice rather than other high-value crops, so that the system distorted resource allocation on farms. Yet the arrangement had provided a stable supply of rice for the government to distribute to its employees. By the 1970s, the system had outlived its usefulness, and critics charged that its allocative inefficiencies were becoming excessive. Thus, the policy was finally abandoned.

The early land reform, government funding and technical support to farmers, and expanding domestic and international demand for farm output provided sufficient incentives and new technology for family farms to increase output at a growth rate of 4.2 percent per annum in 1953–62, 4 percent in 1963–72, and 2 percent in 1973–82. This performance proved sufficient to supply enough food and raw materials to the urban sector at prices that people could afford without generating shortages and price inflation. On the other hand, the rapid growth of the urban sector and new export opportunities after 1965 kept demand for farm output strong so that farm prices did not begin to fluctuate violently and decline. Taiwan seems to differ from other countries during their economic transformation when their agricultural sector typically suffers protracted and severely declining terms of trade.

Having briefly reviewed the response of family farms, service establishments, and manufacturing firms to government policies both before and during the period of export-led growth, we offer these insights. First, government policies to restructure prices and financial incentives; channel resources to more competitive, high value-added activities; and restore balance in the economy through infrastructure development seem to have paid off. In the early 1950s the stability and revival of the economy was critical, and government controls achieved their ends. But continued reliance upon these controls rapidly distorted the structure of incentives and stifled entrepreneurial activities. The economy clearly was developing problems by 1956–57: more unemployment, higher inventories, and rising unused productive capacity.

Second, government reform of the exchange-rate control system and the liberalizing of trade tilted entrepreneurial activities to export and sparked a massive rural-urban migration. Economic units of all kinds vigorously responded to the new price incentives. A remarkably smooth transition to greater manufacturing and service activities took place. Family farms became more capital-intensive and diverted more resources from food grains to special crops, livestock, and aquatic products. Economic fluctuation remained minimal except for price shocks incurred from skyrocketing petroleum prices in 1973 and 1979.

Third, government policies aimed at promoting exports, stabilizing the domestic economy, and expanding the infrastructure helped to sustain the export-led growth until the world recession of 1981–82. Even then the Republic of China would emerge from that recession in 1983 and achieve the highest economic growth rate of any country in the world in 1984. The highly competitive factor and product markets worked to rapidly reallocate resources and goods and services.

The Period in Historical Perspective

The economic dualism that marked Taiwan in 1950 still persisted in 1960 but disappeared by 1981. Taiwan's population growth continued to exceed 3 percent per year in 1952–1965, and while it gradually declined during the transformation phase, it was 1.9 percent in 1981, still a very rapid growth rate for a developing

country. As a country only 36,000 square kilometers in area, the population density in 1982 had become 508 persons per square kilometer, one of the highest in the world.[60] The Republic of China's experience does indicate that even under rapid population growth and with a large labor surplus, pursuing the correct economic policies can produce a rapid economic transformation. But were not the conditions in Taiwan very special for the Republic of China and its people to have achieved the successful growth they did? What about the Japanese colonial heritage and the abundant U.S. economic aid between 1950 and 1965? What of the favorable expanding international market of the 1960s and 1970s that Taiwan was so fortunate to enter?

To be sure, these conditions were helpful, but they are not sufficient to explain the remarkable economic transformation between 1965 and 1981. If certain government policies had not been initiated when they were, even those favorable conditions would not have sufficed for Taiwan to have achieved the transformation that it did. Why not? Let me offer the following argument.

Just as the Marshall Plan directed crucial economic aid to the Western European countries and helped restore the economies, so did American aid play an important role in Taiwan. American economic aid in the early 1950s financed the import of vital consumer and capital goods that could not have been produced domestically without diverting more resources from defense. Yet during these same years the Nationalist government continued to spend a very high proportion of the budget and allocate a large share, perhaps close to 10 percent, of gross domestic product for national defense. It has been pointed out that Taiwan could have grown just as fast and have consolidated her economic infrastructure for further growth as well as it did if the country had had less aid but a smaller defense budget. Though this might be true, government leaders opted for a strong defense, and they refused to cut military spending during the transformation phase, so that Taiwan's economy continued to bear a very heavy military expenditure burden even after American economic aid ended in 1965.

In 1982 the per capita military spending in the United States came to US$1,028 with a nominal per capita income for that year of US$13,242—7.7 percent of per capita income. For that same year Taiwan's per capita spending for defense came to around

$US240 with a per capita income of US$2,500, or 9.6 percent of per capita income. In other words, the average citizen bears a very heavy military burden, as appears to have been the case ever since 1950. But in spite of such a burden, Taiwan's economy experienced a rapid and smooth transformation. How was that possible even after the ending of U.S. aid in 1965?

There is every reason to believe that the government could have oriented the economy toward the international market as early as 1955 if the will to do so had existed. But that was not the case. Powerful economic interests both inside and outside the government opposed any such move. The economic doctrines justifying the import-substitution strategy and tight control over the private sector still had their strong supporters in government. Is there any reason, then, to believe that Taiwan could have postponed the 1958–59 reforms until later, 1960 or beyond? The answer is yes. When we observe the policy experiences of the Philippines and the Latin American states, we note that their leaders adhered to the import-substitution strategy and the full complement of restrictive controls which that approach required until the late 1970s. Therefore, the 1958–59 reforms need not have been introduced at all or certainly much later than was the case. In other words, if persuasive arguments for them had not been made and powerful persons had not supported them, they would not have prevailed. Certainly the development pattern that unfolded after the early 1960s could not have taken place without them.

But simply launching those reforms might not have been enough. We have described how a series of follow-up policies were introduced that helped private enterprise to allocate resources through markets and carry out the transformation. If those policies had been in error, the 1958–59 reforms might not even have borne fruit. Instead, crippling inflation might have resumed; new economic controls and regulations might have been imposed to stifle private enterprise. But proper government policies did nurture private enterprise, and the timing of those policies also was crucial.

But what of markets and their role? Special attention has been focused upon the important role that markets played to allow private enterprises to adhere to their comparative advantage and use abundant resources efficiently and gradually switch to the use of

more scarce resources like capital goods. Paradoxically, the small and medium-sized firms that so readily accommodated these markets never made high R&D expenditures, nor did they generate new technology of their own. But technical diffusion did occur. Entrepreneurs borrowed from foreign enterprises and the international market. By a gradual learning-by-doing process, these entrepreneurs raised the productivity of their firms.

Our focus so far has been on the economic activities, both public and private, that helped to initiate and shape the distinctive character of Taiwan's economic transformation between 1965 and 1981. We have seen that that experience was a unique case. The ingredients that made it possible are not likely to be easily transferred to other developing countries to help them initiate their transformations. But one lesson that might be tranferable and adopted by developing countries does seem important: If state policies can nurture the private sector by encouraging it to perform better, and if these policies can promote the re-deployment of resources to higher value-added economic activities that comply with the comparative advantages those countries possess, then developing countries should be able to initiate their transformation phase as well. The more specialization and trade that can be encouraged under conditions of stability and peace, the greater the prospect for economic advancement and the improvement of society's welfare.

In terms of confirming or rejecting economic development theory, what does the Taiwan case tell us? Space does not permit a review of all relevant economic development theory, but by listing the essential features of Taiwan's transformation we can offer a few observations.

First, in the pre-transformation phase very little surplus labor was reallocated to other sectors because small and medium-sized firms in manufacturing and services were not growing rapidly. During the transformation phase the growth of small and medium-sized firms became more rapid because of expanding market demand, a significant change in relative prices, and new profit opportunities. Their rapid growth provided a vigorous demand for labor. Surplus labor was reallocated among all sectors.

Second, during the transformation phase the terms of trade became moderately unfavorable to agriculture, but they did not worsen over time. Real wages rose more rapidly but never outstripped productivity. Increases in per capita income occurred because of rising productivity.

Third, capital shallowing and capital deepening occurred at the same time during the early transformation phase but capital deepening began to dominate by the 1970s and continued thereafter. This trend occurred in all sectors.

From these remarks, we can observe that the Taiwan case reveals some characteristics associated with both the classical two-sector and neoclassical models, but it does not adhere faithfully to either. The Taiwan case does show that the creation of appropriate price and income incentive structure is critical for the reallocation of resources. Further, if markets are highly competitive and can allocate resources fairly efficiently, technical diffusion, productivity gain, and employment increases can take place in all sectors. The key, of course, is that these developments take place in all three sectors and that policies are not slanted to favor a single sector over others. Finally, carefully timed and implemented economic policies that modulate the private sector to allocate resources to higher net value-added activities will be more successful than policies designed to protect select industries in the marketplace.

3

SUNG YEUNG KWACK

The Economic Development of the Republic of Korea, 1965–1981

The Republic of Korea is a developing country that has achieved remarkable economic growth over the last two decades. Since 1965, Korea has been transformed from an underdeveloped, agricultural country to a leading Newly Industrializing Country (NIC). Between 1965 and 1981, Korea's Gross National Product (GNP) multiplied twenty times from $3 billion to $63 billion; per capita GNP increased sixteen times from $105 to $1,628; and per capita consumption rose twelve times from $88 to $1,054 (table 1). In fact, if one excludes the OPEC countries and the centrally planned economies, the growth rate of real GNP in Korea ranked fifth in the world during the 1960s and first thereafter until 1978. At