THE ROLE OF GOVERNMENT IN ECONOMIC PLANNING AND DEVELOPMENT: THE CASE OF THE ROC ON TAIWAN

TZONG-SHIAN YU

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The Role of Government in Economic Planning and Development:
The Case of the ROC on Taiwan

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I. Introduction

Generally speaking, there are three kinds of economic systems in the late 20th century, the centrally planned economy, the market economy and the mixed economy. In a centrally planned economy, all resources are allocated by the government and private property is not allowed to exist. This kind of economic system has largely disappeared since the Soviet Union collapsed in 1991. In a market economy, resources are not allocated by the government but by the "invisible hand" of market forces. This type of economic system characterizes many developed economies.

In addition to these two economic systems, there is the third type, the mixed economy in which there is economic planning by the government but private sector activity is subject to market mechanisms. This third type of system is characteristic of many newly industrialized economies. In a mixed economy, the government plays a very important initial role in economic planning and development, but this role is gradually reduced with the maturation of the economy and the expansion of private enterprises.

In this paper, I would like to use the case of Taiwan, the Republic of

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China to explore the evolution of the role of government in economic planning and development in a mixed economy. To do this, the nature and content of economic planning are first examined. Then the evolution of the goal of economic development, and the role of the government in the process of Taiwan’s economic development are carefully analyzed, and some implications for other developing countries are drawn. Finally, concluding remarks are summarize the foregoing analysis.

II. The Nature and Content of Economic Planning in Taiwan

First of all, one might ask why Taiwan has adopted a mixed economic system and undertaken economic planning to achieve its goal of economic development. To answer this question, one must be aware of the world situation at the time just after World War II when the ROC was first establishing itself on Taiwan. Economic planning was very widespread at this time, particularly in many developing countries. These countries supposed that economic planning could effectively help their economic development. Even the United Nations and the World Bank, when determining how to assist some country, would ask the government of the receiving country to provide a detailed economic plan. As the economic plan was carried out, the government usually provided guidance and supervision, which has greatly influenced policy-makers of developing countries. More noteworthy, after World War II, a large part of the world embraced communism, and every communist country had economic planning. According to the official propaganda of these countries, only economic planning could help to achieve the goal of reallocation of resources and equal distribution of income and wealth. Many freely developing countries were also more or less influenced by the idea.

In the case of Taiwan, two additional reasons may be cited for adopting economic planning:

(1) For the effective use of limited resources: In the 1950s and 1960s, Taiwan faced a situation of limited natural resources and dense population, so people in Taiwan were destitute and the quality of life was poor. Above all, because Taiwan was faced with a continuing
military threat from the Chinese communist regime, the government had to control and make the best possible use of its limited resources in order to satisfy people’s basic demands.

(2) For the support of weak private enterprises: Before the 1970s, there were no large-scale enterprises or established entrepreneurs in Taiwan. The ROC government believed that its officials knew more about business than the private sector and had a responsibility to assist small businesses. So, the government used economic planning to promote economic development.

In Taiwan, economic planning seeks to promote economic growth and maintain price stability, and these two goals have been achieved at each stage of Taiwan’s economic development. Taiwan is a mixed economy composed of two sectors: the public sector and the private sector. The former is responsible for the management of the government budget. The main functions of economic planning are to effectively manage the public sector, which is responsible for the government budget, and to influence the behavior of the private sector, which will be dealt with later.

1. The Management of the Public Sector

Public sector responsibilities include government budgeting, allocation of government investment, and administration of public enterprises.

(1) Government Budgeting

Before 1968, government budgeting in Taiwan was conducted based not on economic forecasts but solely on the policy-makers’ judgment. They usually used the method of percentage increase, despite the outlook for future economic conditions. Since 1967, a group called Forecasters of Aggregate Supply and Demand, set up in the central government, has been responsible for forecasting aggregate supply and demand for Taiwan’s economy. Government budgeting is now based on forecasts from this group, made by means of econometric models. The econometric model has also made great contributions to maintaining aggregate supply and demand at approximately equal levels. Aggregate supply includes domestic and foreign supply; the former is the GDP while the latter is the import of goods and services. Aggregate demand includes domestic and foreign demand; the former consists of consumption expenditure and investment, while the latter is the export of goods and services. If aggregate supply
and demand cannot be maintained at approximately equal levels, prices will be unstable, as the figure below illustrates.

\[
\begin{align*}
\text{If aggregate supply} & \leq \text{aggregate demand} & \rightarrow & \text{Stable} \\
& & \text{Price goes down} & \\
& & \text{Price goes up} & 
\end{align*}
\]

From the forecast estimates provided by econometric models, the government can set the growth rate of government spending and revenue with greater confidence, and so avoid or reduce inflation.\(^1\)

(2) The Allocation of Public Investment

The majority of public investment is in public works, such as the construction of highways, railways, harbors, and the like. The costs of small-scale public works are incorporated in the annual budget, while most large-scale public works are implemented as special development projects. Since the early 1970s, the government has undertaken a plan for ten major development projects (1973), followed by a plan for twelve major development projects (1978), then fourteen major development projects (1984). These were followed by a six-year National Development Plan (1991) and another plan for twelve major development projects (1993). The six-year National Development Plan currently in force is an comprehensive one in which a large proportion of money is to be spent in infrastructure construction.\(^2\)

(3) Administration of Public Enterprises

Public enterprises played a very important part in the early stage of Taiwan’s economic development, but their importance has gradually

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\(^1\) There is a series of econometric models built by the group responsible for the Forecast of Aggregate Supply and Demand. The group has an annual model, a semi-annual and a quarterly model, which are all revised or modified periodically. The group is located in the Bureau of Statistics, the Directorate-General of Budgeting, Accounting and Statistics, Executive Yuan, R.O.C.

\(^2\) The Council for Economic Planning and Development, Executive Yuan, is in charge of the design and supervision of the implementation of major development projects, four-year plans and the six-year National Development Plan. Prior to 1970, the Council was powerful in allocating resources (including U.S. aid), and in supervising the implementation of development projects.
declined with the rapid expansion of private enterprises. For instance, in 1952, public enterprises accounted for 56.6 percent of Taiwan’s total industrial production, while private enterprises contributed the rest. By 1994, the former could only claim a 16.5 percent share as opposed to 83.5 percent for private enterprise. This implies that the effect of economic planning has been correspondingly reduced. The budgets of public enterprises are independent of government expenditures, and they have their own budgeting process, but they are still subject to inspection by the Legislative Yuan (the Congress). Before 1980, lawmakers in the Yuan were only interested in how much surplus public enterprises could submit to the government as revenue; recently, legislators are not only interested in their surplus but are also with their efforts at environmental protection.

2. Use of Economic Planning to Influence the Private Sector

Although the government cannot control the private sector, it can use policy measures to directly or indirectly influence the direction of private investment, as can be seen in the following examples.

(1) Making use of US aid to establish new industries

From 1951 through 1965, the government of Taiwan received US aid amounting to US$1.5 billion, which gave Taiwan a big hand with its economic construction and take-off process. Some of the US aid was assigned to special uses, for instance, the development of the flour milling industry, the textile industry and the plastic industry. These industries have been extremely helpful in improving people’s livelihood in the period of import-substitution.

(2) Establishing special zones for industrial development

Since the 1960s, the government has set up various economic zones for different purposes, including export processing zones in Kaohsiung and Taichung. These zones were established to enhance the export activities of labor-intensive industries and the introduction of software technology into Taiwan. In the 1980s, the government set up the Hsinchu Science-based Industrial Park to enhance the development of technology-intensive industries to upgrade domestic industries. Most of the products of these industries are export-oriented. Thanks to the success of the Hsinchu Park, the government is planning to set up more such industrial parks in Taiwan.
(3) **Encouraging the development of export-oriented industries**

The government has used financial and fiscal measures to help export-oriented industries. They include the epoch-making "19-Point Financial and Economic Reform" (1959) and the "Statute for Encouragement for Investment" (1960) which both made substantial contributions to the development of Taiwan's industries in the 1960s and the 1970s. From 1991, the government discarded the latter statute and promulgated the "Statute for Upgrading Industries" instead. This new statute is designed to encourage industries to enhance their R&D programs.

(4) **Encouraging the development of special industries**

The 1960 statute to encourage investment was based on the idea that some kinds of industries have greater potential to develop or that they are more consistent with some criteria of development than other industries. The ROC government sought to promote such desirable industries.

**a. The development of heavy and chemical industries**
In the 1970s, the government completed ten major development projects, which included the establishment of a steel mill, and shipbuilding and petrochemical industries.

**b. The development of strategic industries**
In the early 1980s, the government decided to develop strategic industries which met six criteria: good potential for profitable growth, a large linkage effect, high value-added components, high density of technology, a low coefficient of energy use, and a low degree of pollution. The government encouraged these strategic industries by offering them low-interest loans, assistance and guidance with developing or acquiring technology, management and marketing skills.

**c. The development of ten newly emerging industries**
The ROC government has targeted ten industries that it believes will have enduring importance in the future: communication, information, consumer electronics, semi-conductors, sophisticated instruments and automation machinery, aerospace, high-end materials, special-use techniques in

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3These six criteria have been criticized by academics, who object that the six criteria are inconsistent with each other. An industry can meet one criterion but then cannot meet the rest. The most difficult problem is that it is extremely difficult to identify which industry should really meet the criteria.
chemistry and medicine, health care, and pollution prevention. The development of these industries is expected to be helpful for upgrading Taiwan's industries.

**d. Financing large-scale enterprises**

Many large-scale enterprises have enjoyed preferential treatment by the government. If such enterprises are interested in setting up new industries consistent with the goals of the investment encouragement statute, they can receive full financing in the form of low-interest loans from public banks.

(5) **Privatizing Public Enterprises**

Recently, privatization of public enterprises has become a big issue in Taiwan. The government has decided to privatize some public enterprises. The following public enterprises have been privatized: China Petrochemical Corporation (privatized in June 1994), China Engineering Corporation (June 1994) and China Steel Corporation (March 1995). More public enterprises will be privatized in the future.\(^4\)

The government supposed that it could make better investment choices for Taiwan than private enterprises, and attempted to shape investment decisions in this way, while private enterprises had their own considerations. Some of the government measures achieved their expected goals, but many of them had little influence on private businesses' decision-making.

III. **The Evolution of the Goal of Economic Development**

From 1953 through 1990, Taiwan had seven 4-year economic plans, one 3-year economic plan and one 6-year economic plan. Each 4-year plan had several targets, many of which could not be achieved within a given 4-year

\(^4\)Opposition movements against privatization have arisen among workers from public enterprises since the labor unions are very worried about their new working conditions, such as wage rate, and job security, etc.
plan period. We can divide the period 1951 to 1994 into three stages. Roughly speaking, at each stage there was a main strategy.

The strategy of stage 1 (1951-1980) was to achieve economic growth in Taiwan with equitable income distribution. To promote economic growth, the policy was to modernize agriculture and to promote industrial development through expanding exports and improving the quality of manpower. At the same time, to improve income distribution, the expansion of educational opportunities for everyone, the maintenance of price stability, and the creation of job opportunities were all emphasized.

For stage 2 (1981-1990), the strategy was to continue economic growth and to improve the quality of life. While continuing to stress economic growth, environmental protection also began to be emphasized. In order to raise living standards, the improvement of economic and social conditions were also emphasized.

In the present stage 3 (from 1991), the strategy is economic growth and sustainable development. For economic growth, the policy is to upgrade Taiwan’s industrial structure by means of research and development. To achieve sustainable development, the natural environment must be protected and pollution must be minimized.

However, with the continued rapid economic growth through all three stages, social conditions in Taiwan have gradually been changing and they have exercised some influence on economic development, making each stage different from the others. This has resulted in a different emphasis at each stage.

IV. The Role of the Government in the Process of Economic Development

The interaction of continuing economic growth and the accompanying social change has influenced the role of the government. Government has changed from being a conductor and supervisor of activity to being an advisor and then to a referee in a game played primarily by the private sector.
1. As a Conductor and Supervisor

In the early stage of Taiwan's economic development in the immediate postwar period, the elite of Taiwan's society were concentrated in the government and formed a technocracy. The majority of the population was not well educated. In the private sector, there were no entrepreneurs, and no large-scale enterprises. The government possessed more capital, knowledge and information than the private sector. This was the main reason why the government had to take the lead in setting up many large-scale public enterprises on the one hand, and designing many projects for the private sector to carry out on the other. Above all, the government controlled the use of US aid. Needless to say, the government determined the direction of investment from the 1950s to the early 1970s.

2. As An Advisor

Since the late 1970s, many large-scale enterprises have gradually emerged in Taiwan. These enterprises, rather than government, started to absorb high-quality manpower because many graduates preferred to work with private enterprises where their salary would be more attractive and their promotion more flexible than in government service. Intelligent and ambitious people came to prefer working in the private sector to taking positions in the public sector.

Although the government promulgated many measures to encourage private enterprises to invest in strategic industries as designated by the government, private enterprises just took these promotional measures as advice and continued acting according to their own judgment and choice. In other words, the public sector had difficulty getting the private sector to behave as the government planned.

3. As a referee ensuring free competition

Thanks to the rapid development of telecommunications and mass media, the whole world has become so small that the relationships between countries have become very close and complicated. The government can no longer be fully aware of all developments, and has to ask experts and consultants for assistance. Since the mid-1980s, many political, economic, and social problems have arisen in Taiwan.

In the economic arena, as the government has begun to adopt
economic liberalization and internationalization measures, the calls for privatization have become loud. The future of many public enterprises has become a major issue.

In politics, since the government lifted martial law in 1987, many anti-authority movements and street demonstrations have occurred in big cities around Taiwan. In the social sphere as well, labor actions and environmental awareness and protection campaigns take place very often. All this agitation has caused the investment climate in Taiwan to deteriorate.

So the government is being asked by the business community to revise out-of-date laws and regulations and to initiate some new ones. The government is being asked to provide Taiwan with a better investment climate, to effectively execute existing laws and regulations, and to maintain fair trade for the public.\(^5\)

V. Implications for Other Developing Countries

Other developing economies may be able to draw some implications from Taiwan’s economic development experiences. The most important are as follows:

1. Strong But Efficient Government

History tells us that in the early stage of economic development, a strong government is required. However, the government must also have the ability to implement its economic plans successfully. A so-called strong government doesn’t mean a dictatorship under which policy-making depends on one person; Policy-making is best done by a group of experts, advisors, and administrators. Once a policy is made, it should be carried

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\(^5\)In order to maintain fair trade, the government set up the Fair Trade Commission in 1992. Its main function is to maintain economic order by eliminating monopoly prices, oligopoly prices, and irregular fluctuations of prices.
out immediately and completely.

2. Reasonable Economic Strategy

Before an economic strategy is adopted, the historical and cultural background of the country should be taken into consideration. If the country is currently agricultural, priority in economic development should be given to the agricultural sector. If the country is characterized by a high population density, the initial development of labor-intensive industry should be considered. In a country without abundant capital, it is unwise to try to develop heavy industry. So adherence to the principle of comparative advantage is still effective for making appropriate use of resources in many countries.

3. Effective Use of Foreign Capital

Since World War II, the World Bank has spent tremendous amounts of money in developing countries, assisting them in their economic development. But the consequences of this assistance have not been as successful as anticipated. The problem is that borrowing countries did not make effective use of the money by applying appropriate approaches. The correct principle should be: don’t just give people fish, teach them how to fish. Unfortunately, the World Bank has often been offering fish to people.6

4. Attracting Foreign Investment

Countries which are poor in capital are generally also rich in population, so that less production must feed more. It is true that without investment, no production takes place. To initiate economic development, foreign investment is very helpful. To attract foreign investment, the best approach is to provide with investors a favorable investment climate which includes adequate and sound infrastructure, clear and effective laws and regulations, efficient public administration, and adequate manpower.

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6US aid was used effectively in Taiwan, and Taiwan was considered a model for successful use of US aid. Refer to Neil H. Jaco, *U.S. Aid to Taiwan: A Study of Foreign Aid, Self-help and Development*, (New York:Frederick A. Praeger, 1966).
5. Export-led Development Strategy

To achieve economic lift-off and rapidly growth has been the goal of many developing countries. But, so far, not many have successfully achieved this goal. In many developing countries, the domestic market is insufficient to absorb what domestic industries produce. If they produce exportable items, not only can they sell the residuals, but also by so doing they can earn foreign exchange, which can be used for imports of items which the country needs. This export-led development strategy has been adopted by many countries and has proved a good strategy.

6. Manpower as a Key Factor

The most important factor for sustained economic development is manpower. If citizens are not well educated and effectively employed, they are a liability to the country in question. If they are well educated and effectively employed, they are an invaluable asset. How to cultivate manpower is a question of great importance. Particularly for the coming century, knowledge and information will be necessary conditions for competition.

VI. Concluding Remarks

In a centrally planned economy, the government is all-powerful, but cannot manage the economy, and this kind of economy has proven unworkable. In a mixed economy, the government plays some role in promoting economic development by means of economic planning, but whether economic planning can actually be materialized mainly depends on how many resources the government can control. At the early stage of economic development, economic planning might be effective. However, with rapid economic development, the private sector will flourish, and the government has to change its role so as to cope with emerging economic and social conditions. As a result of these new conditions, economic planning is no longer effective in influencing the behavior of private enterprises. The most important role the government can then play is to create a better investment climate and a more comfortable living environment for its citizens.
A mixed economy is nothing but a transitional phase on the way to a market economy. As a developing country transforms into a developed one, its mixed economy will naturally change to a market economy. Even in a market economy, the government still has an important role to play in economic development when market failure takes place or when fair trade has been interrupted.
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