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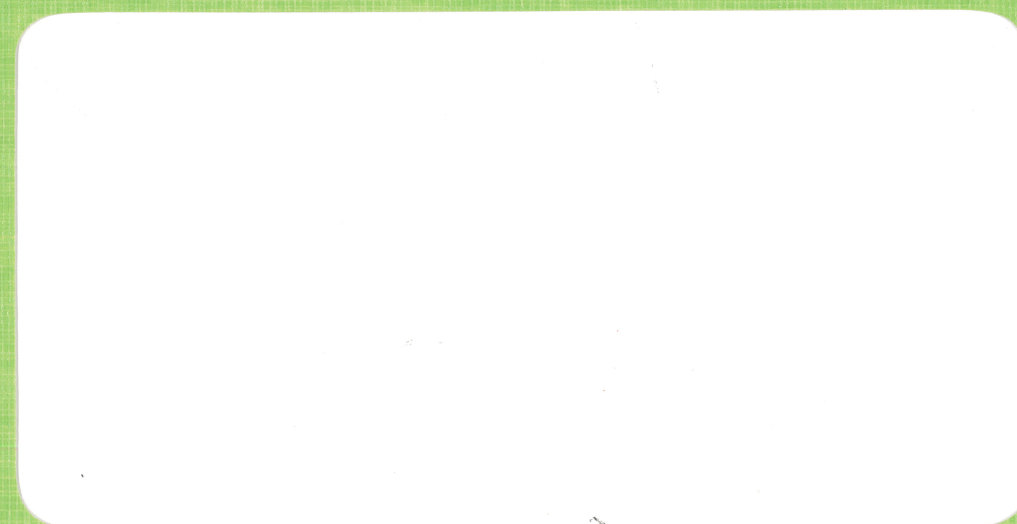
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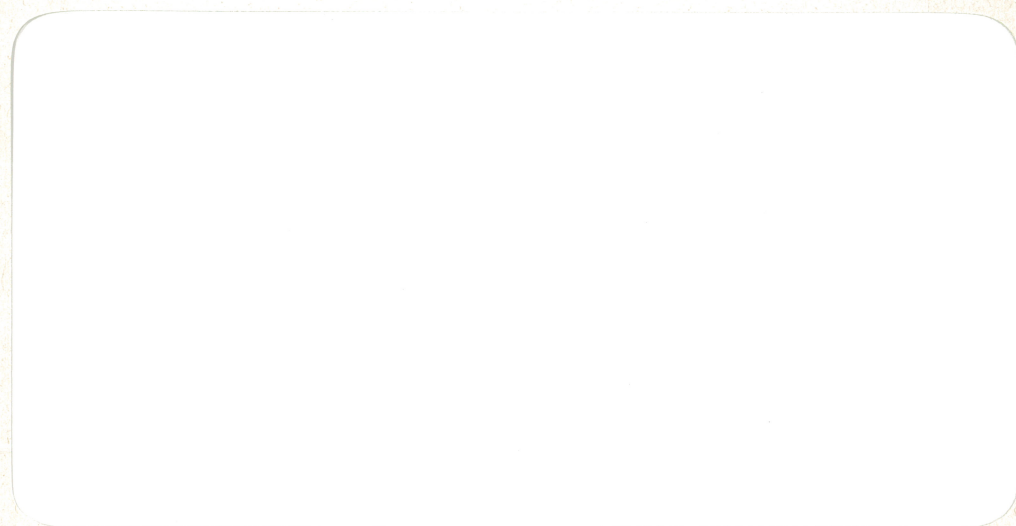
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**Achievements in Taiwan's Economic Development  
- A Miracle?**

**Tzong-shian Yu**

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# **Achievements in Taiwan's Economic Development - A Miracle?**

**Tzong-shian Yu\***

## **I. Introduction**

During the last several decades, almost every country in the world has been eager to have rapid economic growth. However, only the East Asian countries (with a few exceptions with sluggish growth), have achieved this successful development. These nations are called newly industrializing countries, or dynamic Asian economies. Amongst these East Asian countries, the Republic of China on Taiwan is a distinct case and should be dealt with as a special situation. Many Westerners consider Taiwan's economic achievements as a miracle. Is this radical transformation of an economy a miracle?" The purpose of this paper is to address this question and search for its answer.

In order to do this, we must first examine the background of Taiwan's economic development and identify the achievements of this economic progress. We then

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must explore the sources of Taiwan's successful achievements and evaluate the rapid rate of growth. Finally, the concluding remarks will discuss whether Taiwan's remarkable achievements are truly a miracle.

## **II. A Background on Taiwan's Economic Development**

Taiwan encompasses a total land area of 36,000 square kilometers, including an array of small to large islands. Except for Taiwan proper, the development of the surrounding islands is almost nil. The main island of Taiwan is mountainous, and only one-fourth of the total land area is arable. Rivers and streams are so short and turbulent that severe floods frequently damage farm crops and transportation facilities. Taiwan is not endowed with fertile soil and abundant natural resources, but has regular typhoons and earthquakes which cause substantial damage.

Prior to 1950, Taiwan had not yet recovered from the serious destruction of World War Two. During this period of conflict, Taiwan was occupied by Japanese military forces and was heavily bombed by the Allies. The network of highways and rail transportation systems suffered heavy damage from this aerial bombardment. Agricultural and industrial production had not yet recovered, and there was a serious shortage in goods in tandem with rampant inflation. The problem was compounded when in 1949 the central government was forced to move to Taipei and about 1.7 million people including troops, civil servants and refugees withdrew from the Mainland. This sudden influx of people resulted in serious social problems

as well as food and shelter shortages and unemployment.

At the same time was the continued military threat from the Mainland. When the Chinese Communist Party seized the Mainland in 1949, the next step was to subjugate Taiwan. An intense and narrowly-won battle took place on the outlying Kinmen Island. Although the Communist forces were unsuccessful in that attempt, their intent to bloody Taiwan did not change. Prior to the Korean War, people in Taiwan lived in fear due to the weak status of the Taiwan military forces and the lack of U.S. military aid resumption. From the Korean War period onwards, the U.S. Navy helped maintain the security of the Taiwan Strait. In 1958, the Chinese Communist regime heavily bombarded Kinmen Island and this indicates that they have not given up their ambitions to conquer Taiwan.

From 1950 to 1980, Taiwan's diplomatic relationship also worsened. Many major, developed nations broke their diplomatic relationships with the Republic of China on Taiwan and recognized the P.R.C. instead. In particular, the forced withdrawal of the R.O.C. from the United Nations in 1971 and the U.S. break in official diplomatic relations with the R.O.C. in 1979 were severe shocks for Taiwan. In addition, Taiwan suffered through two oil crises in this period.

Under the above conditions, the government in Taiwan had no alternatives except to reconstruct and strengthen Taiwan with all possible means.



### **III. Achievements of Taiwan's Economic Development**

Even under these unfavorable conditions, Taiwan over the last twenty years has achieved spectacular success in economic development. Taiwan has successfully transformed from a poor society to a prosperous one, and from an agriculture-oriented economy to an industry-oriented one. More precisely, the Republic of China on Taiwan has achieved high economic growth with equitable income distribution, moderate inflation, low unemployment, sound public finance, insignificant foreign debt and huge foreign exchange reserves. This is why Taiwan has recently become a focal point of the world's attention.

#### **1. Sustained High Economic Growth and Equity**

During the last forty years the average growth rate of the GNP has been 8.84 percent; the highest in the world. The average growth rate of per capita GNP has been 6.45 percent.<sup>1</sup> Taiwan's economic gains have tended to be equitably distributed and the Gini coefficient generally declined from 0.323 in 1966 to 0.277 in 1980. However, since 1981 this coefficient has started to rise, and in 1989 it rose to 0.303.<sup>2</sup>

<sup>1</sup> As compared with Japan, Korea, Singapore and Hong Kong during the last four decades, Taiwan's economic growth rate is the highest.

<sup>2</sup> Before 1964, there was no reliable data for computing the Gini coefficient. This coefficient reversed its decreasing trend from 1981 onwards and there are several reasons for this. Firstly, as the country becomes wealthier it is natural for some very-high income groups to emerge. Secondly, in a wealthy country, professional individuals, including technicians, usually have high incomes. Thirdly, from 1986 prices of real estate have skyrocketed and property owners have become very wealthy in comparison to others. This last factor is a very important influence on income distribution.

## **2. A Moderate Inflation Rate**

When the inflation rate is measured as the rate of change in the consumer price index, the average annual rate from 1954 to 1990 was 6.51 percent; when it is measured as the rate of change in the wholesale price index, its average annual rate during the same period of time, was 5.09 percent. During the last ten years (1981 to 1990) the former measurement method yields 3.15 percent, while the latter results in -0.50 percent. From 1971 to 1980, the inflation rate was higher than 10 percent because of the two oil crises. When compared to its neighboring countries, the inflation rate in Taiwan has been, and remains, very low (see table 2).

## **3. A Low Unemployment Rate**

Many developed countries continue to suffer from a high unemployment rate. In Taiwan, before the 1960s, the unemployment rate ranged from 1.70 percent to the rather high (for Taiwan) level of 4.37 percent. After 1968, the unemployment rate generally declined until 1982. From 1982 to 1986, it rose to 2 percent. During the last five years, it has been maintained at a low level and in fact the shortage of labor has become the dominant concern in this area.

## **4. Sound Public Finance**

The government in Taiwan has maintained a sound public finance system. From 1952 through 1990, a budget deficit occurred in only seven of these years and occurred mostly before 1963. Since that time (except for 1983 in which the budget



deficit accounted for 0.06 percent of government revenue), the government has maintained a budget surplus which has supported the completion of the so-called Ten Major Development Projects and the Twelve Major Development Projects. During the last thirty-seven years (1954 to 1990), the government bond issuance has accounted for less than three percent of the government revenue. This sound public finance system is directly attributable to the strict control of budget expenditure and the precise estimates of budget revenues.

#### **5. Insignificant Foreign Debt Burden**

Many developing countries have born a huge foreign debt and many developed countries also suffer from this problem.<sup>3</sup> In Taiwan, several public enterprises have used loans to finance their investments. By the end of 1990, the amount outstanding was less than U.S.\$ 2 billion, which is not high enough to be influential for the balance of payments.

#### **6. Huge Foreign Exchange Reserves**

Due to successive trade surpluses, the government by July 1991 had accumulated U.S.\$ 74 billion in foreign exchange reserves, which was one of the highest amounts for an individual country in the world. In 1989, foreign exchange reserves were even higher and stood at U.S.\$ 76 billion and were held entirely by the Central Bank of China. Since that time the foreign exchange system has been liberalized and the private sector can now hold as much foreign exchange as they wish. The

<sup>3</sup> Many developing countries have born foreign debt burdens such as Brazil, Mexico, Argentina, and mainland China. Even wealthy countries such as the U.S. suffer from this problem.

huge foreign exchange reserves have caused the N.T.\$ to appreciate against the U.S.\$ to some extent, but on the positive side they have also drawn worldwide attention to the economic success on this side of the Taiwan Strait.

Among these above-mentioned six achievements, the most important one is that Taiwan has maintained a sustained high level of economic growth in tandem with equitable income distribution. In fact, Taiwan has truly reached a point where the wealth is in the hands of the people.<sup>4</sup>

#### **IV. Sources of Economic Achievement**

As compared with any other developing country, Taiwan's economic achievements are obviously impressive, particularly given the backdrop of so many unfavorable conditions. Many speculate concerning these remarkable achievements and how they came about. Is it a miracle or just a natural result of the initiative and diligence of the people?

##### **1. Social and Political Stability**

Although hostile elements have attempted to destabilize the social and political stability so as to enable an easy takeover, the government on Taiwan utilized martial

<sup>4</sup> In the Republic of China on Taiwan, wealth has accumulated and this wealth is held in the hands of the people: both of which are ideal targets for countries to strive for.



law to maintain social order and allowed open-minded measures to ensure political stability. During the last forty years only two movements have been strictly restricted: Communist activities; and the independence movement. These activities have been deemed dangerous to national security and hence, have been strongly controlled. In fact, social and political stability have been essential cornerstones for the creation of a favorable investment climate, which in turn is a requirement for sustained, rapid economic growth.

## **2. Educational Development and the Use of Manpower**

Whether a country's labor force is an asset or a liability to economic growth depends on whether it has been well-educated and effectively employed. Before 1950, there was an influx of trained personnel from the Mainland. The arrival of this elite group meant exposure for Taiwan to the process and requirements of modern economic growth.<sup>5</sup>

Since 1949, when the central government moved to Taipei, elementary education has been strongly emphasized and the literacy rate dramatically rose from 57.9 percent in 1952 to 83.6 percent in 1968. From 1968 onwards, the government instituted nine-year compulsory education programs, as well as emphasizing the development of professional education programs. Consequently, the quality of labor has improved greatly and Taiwan's workers easily accept and operate new technology

<sup>5</sup> Professor Simon Kuznets pointed this out in a conference on Taiwan's Economic Development held in 1967 and also mentioned it again in his paper, "Growth and Structural Shifts" in *Economic Growth and Structural Change in Taiwan: The Postwar Experience of the Republic of China*, edited by Walter Galeson, Cornell University Press, 1979.

and equipment. In fact, by 1980 a large proportion of students were enrolled in professional (higher education) schools.

From the 1960s to the early 1980s, there was a brain drain problem because many Chinese students who finished their advanced studies abroad did not return to Taiwan. However, since 1985, the situation has completely changed. Many overseas Chinese with new knowledge, technological and managerial skills have returned to Taiwan. This new inflow of high quality elites has made a substantial contribution to the upgrading of the industrial structure from labor-intensive orientation to technology-intensive.

### **3. Appropriate Strategies and Policies**

During the last forty years, the government has implemented key strategies and policies to accelerate economic growth and improve income distribution.

#### *A. Land Reform*

Land reform in Taiwan has been successful in promoting agricultural development. Since it is based on redistribution of land to the tiller, farmers' incomes increased and this had great social and political significance in the early 1950s.<sup>6</sup>

<sup>6</sup> See K.T. Li (1990).

Land reform increased agricultural productivity by 21.5 percent between 1950 and 1955 and at the same time farmer productivity increased by 13.2 percent.<sup>7</sup> Land reform was also helpful in improving income distribution in the sense that the rent reduction policy transferred the income from the landlord to the tenant. The transfer of land to tenants also meant that the ownership of land was equalized. The successful implementation of land reform became integral to Taiwan's agricultural development and helped stabilize social and political conditions.

*B. Outward-Looking Development Strategy*

Taiwan is a small island with a high population density and few natural resources and achievement of a self-sufficient economy and rapid economic growth would have been impossible without the expansion of foreign trade. In the 1950s and early 1960s, the main exports were agricultural products. By the late 1960s this situation had changed and industrial products were the main exports. A major role in this process was the use of foreign exchange from exports to finance the import of raw materials and machinery which were then used to increase production and accelerate economic growth.

Since the 1960s, the government has adopted an open-door policy. With the rapid economic growth the government gradually eased its control of imports. By the 1980s, tariff and non-tariff barriers were substantially reduced. In 1985, the government adopted economic liberalization and internationalization policies so as

<sup>7</sup> See Teng-hui Lee (1985).



to upgrade Taiwan's industrial structure and strengthen its international competitiveness.<sup>8</sup>

*C. Labor-Intensive Industry Development to Initiate Economic Growth*

In the early stages of Taiwan's development, the country had a serious shortage of capital and a surplus of labor. To cope with this condition, it was a natural and wise decision to develop labor-intensive, rather than capital-intensive, industries. Labor-intensive industries absorbed labor and eased the problem of unemployed and underemployed workers. These labor-intensive industries also used low levels of capital and it was easy to establish factories and operate stores. This development of labor-intensive industries is one of the main reasons for the very low rate of unemployment in Taiwan over the last three decades.

As wealth increased and capital became more abundant it was a natural transition to more capital or technology-intensive industry.

With regards to the effects of the above-mentioned strategies and policies it is also apparent that not only did economic growth accelerate, but income distribution was also improved.<sup>9</sup>

<sup>8</sup> See Yu, Tzong-shian (No. 9102, March 1991).

<sup>9</sup> There is a good explanation in Fei, Ramis and Kuo's book (1979).

#### 4. The Role of Government

It can not be denied that a country's government must play an important role in the process of economic development. Many developing countries endowed with rich natural resources have had low economic growth and some countries with a dense population struggle just to survive. If one asks why this occurs, there are many answers, but the performance of the governmental body is a key reason.

A good government should be a government of the people and for the people. In Taiwan's case the government nurtured the private sector in the early stages of development and gradually left it alone as it grew in size and capabilities. Early measures to assist the private sector were often restrictive or protective in nature. These measures often took the form of a subsidy such as tax reductions, tax exemptions and low-interest financing for the establishment of specific industries or manufacture of key products.

As for protective measures, they included high tariff and non-tariff barriers for supporting the growth of infant industries, and the control of foreign exchange in order to make effective use of this for the import of machinery and raw materials for industrial production. These measures assisted industries to maintain a high rate of growth.

Public enterprises also played a leading role in the early stages of Taiwan's growth. Public enterprises served three functions. Firstly, as an economic function. Public enterprises supported the private sector with energy supplies and

infrastructure (such as Taipower Corporation and the China Petroleum Corporation).

Secondly, public enterprises served a financial function. When the country is underdeveloped it is impossible to collect sufficient taxes from the public. Public enterprises were therefore assigned to submit their surpluses to the government and this was equivalent to an indirect tax which generally prevails in developing countries rather than developed countries.

Thirdly, there is a social function. When a country is underdeveloped, the low income earners (who are the majority) do not have sufficient resources to use hospitals and transportation facilities unless the government provides these public goods at very low prices.

With the rapid growth of the private sector, public enterprises no longer play a leading role and the privatization of these industries is now an objective.<sup>10</sup>

A sufficient infrastructure is an important requirement for a solid investment climate. Private enterprises are not interested in providing for any infrastructural public needs and the government has played an obvious role in this respect. For example, the Six-Year National Development Plan (initiated by the government in 1991) focusses on infrastructure development to strengthen the investment climate

<sup>10</sup> When private enterprises become increasingly stronger, it is easy for them to constitute a challenge to public enterprises. Since public enterprises are subject to many institutional constraints, they are not autonomous and dynamic in their decision-making and they can not therefore compete with private businesses unless they are a monopoly.

and raise the quality of life in Taiwan.<sup>11</sup> Furthermore, the government's maintenance of social and political stability is a key factor for a favorable investment climate.

From the above analysis we see that Taiwan launched its economic development program in the face of extremely unfavorable conditions. Even so, Taiwan achieved high economic growth accompanied with equitable wealth distribution. In this sense, Taiwan's economic achievements can be termed remarkable, and perhaps even a miracle.

## **V. An Evaluation of Taiwan's Economic Development**

The dynamic achievements of Taiwan's economic development are not as perfect as may be pictured from the above discussion. In the short run, many policies and measures were effective and produced desired results, but in the long run they have also resulted in many problems.

### **1. Protectionist Policy Drawbacks**

The government adopted protectionist policies to protect infant industries. In

<sup>11</sup> The purpose of the Six-Year National Development Plan is as follows: 1) to raise national income; 2) to plant roots for future industrial potentiality; 3) to equalize regional development; and 4) to improve the quality of life. The focus of the plan is on improvement of the infrastructure. To implement the plan, N.T.\$ 8,200 billion (equivalent to U.S.\$ 303.7 billion) is needed to be spent over six years (1991 to 1995).



fact, over the last several decades many industries under the umbrella of protection have grown and developed the ability to compete with foreign competitors. Others have failed to grow and are still in the infancy stage such as the automobile industry. It should also be pointed out that many unprotected industries have flourished and become highly competitive.

## **2. Neglect of Environmental Protection**

Before the 1970s, Taiwan had no idea about environmental protection. Investors had little concern about the application of pollution control, and even farmers overused fertilizers and pesticides so that the land and rivers have become extremely polluted and damaged.

## **3. Land Reform as a Bottleneck to Effective Use of the Land**

Land reform has successfully solved the problem of land ownership which has in turn increased productivity and improved income distribution. However, given the area of land and the increase in the number of farmers, the average area of arable land per farmer has become smaller and smaller. This is not suitable for the effective utilization of machines, and consequently there are no economies of scale, labor productivity has declined, and unit costs have accordingly increased.

## **4. A Low Capacity for Research and Development**

The majority of firms in Taiwan are small and medium-sized and are not accustomed to engaging in R&D. This situation is very disadvantageous for international competitiveness. Furthermore, during the last five years the wage rate

has increased dramatically and the only way to respond to this is to increase the use of technology.<sup>12</sup>

## **5. Excess Savings Leading to Speculative Activities**

In 1980, the foreign exchange reserves began to significantly rise. By 1986, this had accumulated to more than U.S.\$ 70 billion. At the same time there were no investment outlets for this level of savings and thus led to speculative activities including illegal investment activities, and a sharp rise in real estate and stock prices. This resulted in disruption of the financial order in Taiwan.

The excess savings stemmed mainly from the trade surplus, which in turn directly induced the rapid appreciation of the N.T.\$ against the U.S.\$. By the spring of 1990, financial order began to recover, but how to reduce the trade surplus is essential for orderly, sustained growth.

The above discussion illustrates that the economic miracle has had its costs.

<sup>12</sup> From 1960 through 1990, the Statute for Encouragement of Investment was effectively carried out. From 1991 onwards, the government has proposed an alternative policy, i.e. the Statute for Upgrading Industries, which is used to encourage firms to enhance research and development, introduce new technology into their operations and install anti-pollution devices through the use of monetary and fiscal measures.

## **VI. Concluding Remarks**

During the last four decades, Taiwan has had remarkable economic achievements with high economic growth and equitable distribution in spite of unfavorable conditions. The present problem is how to maintain this growth without serious side-effects. In view of the current world economic condition, Taiwan is faced with regionalism and protectionism emerging in developed countries. Regionalism necessarily means protection between regions. International competition is also growing and Taiwan must consider how it will deal with regional barriers and meet the competition.

In the last six years (1985 to 1990), Taiwan has experienced a labor movement, environmental protection protests, democratic adjustment pains and financial disruption. The labor movement has now evolved into a labor shortage problem and labor-intensive industry is no longer competitive.

Environmental pollution remains a serious problem, but the environmental movement has become much more rational. As well, the financial "high fever" has also cooled down and financial order has largely been restored. The democratization process is now drawing the greatest attention and improper association of this with an "independence movement" is dangerous for Taiwan's security and prosperity.

These areas of concern will be dealt with and upgrading of the industrial structure through technology development is also necessary for a strong investment climate. This depends on not only the government, but also the people of Taiwan.



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