

C HAPTER 7

ECONOMIC LESSONS FROM TAIWAN

The main objective of the study is to take the experience of the hard work and struggle of the people and government of Taiwan that has resulted in overall prosperity for this small Asian country and derive lessons learned that could be helpful for the design of economic development strategies for Honduras. We will place emphasis on the intermediate economic development stage of Taiwan, in other words, a four-decade period from 1950 to 1990 when Taiwan went from an agricultural society to highly industrialized nation.

Based on the experience of Taiwan's economic development strategy and the key determinants for its economic growth I will try to identify lessons learned that could be analyzed in the Honduras country context and utilize the experience to view possible applications for Honduras economic development. For example, Taiwan has placed great importance on strategic national development plans, agriculture, trade, and education; Honduras is weak in those aspects.

The success of Taiwan's development model has attracted attention from both policymakers and researchers on the study of its development model and strategies. For policymakers in developing countries, the understanding of Taiwan's development experience may help prepare or formulate their own economic development policies, programs, and strategies. For researchers of economic development, the analysis of Taiwan's experience may provide opportunities to verify important development theories and draw some new lessons.

7.1 Taiwan Model

Gold (1986) states that the success of Taiwan is based on the strict discipline established early in the beginning of the KMT government and the economic development assistance provided by the United States. These two factors helped set the basis for the economic development of the nation and were followed by land reform and

the rehabilitation and industrialization efforts. According to Gold (1986), the extreme case of economic success for Taiwan is not a model for other countries to follow.

The particular situations that occurred in Taiwan are unique to this nation. For example, the Japanese presence in Taiwan before 1950 was a significant factor because of the development-driven agenda of Japan. Another important factor was the considerable economic assistance provided by the United States during the critical early decades. The fact that mainland China at the time had a different developmental agenda was another key factor and finally starting in 1950, Taiwan has enjoyed a period of relative peace and tranquility that has allowed it to develop and consolidate its economy free of outside influences (Gold, 1986).

The scenario described above is unique to Taiwan and would probably not replicate in other circumstances and other nations. Gold (1986) thinks that Taiwan's economic model has some interesting lessons that could be helpful for developing nations looking for a goal of industrialization and economic improvement. Among these lessons we can mention:

- Government commitment for development;
- Agrarian reform;
- Agricultural promotion;
- Government development agencies leading the process;
- Strategic credit allocation;
- Efficient management and collection of economic information;
- Investment in infrastructure;
- Investment in human capital; and
- Proper use and distribution of foreign aid.

Gold (1986) concludes that Taiwan's development model was a combination of a strict state and effective industrializing and the most relevant characteristics of the Taiwanese model that he deems undesirable for other government to adopt is the repression that brought about what he refers to as an "Orwellian state."¹

¹ 'Orwellian' describes a situation or idea that George Orwell identified as being adverse to the welfare of a free-society. Often, this includes the situations depicted in his fictional novel *Nineteen Eighty-Four*.

7.2 Agricultural Development and Industrialization

Extracting from the Taiwanese experience, we will focus our attention to the role that agriculture played in facilitating the industrialization of the country. We will be quoting mainly the works of Mao and Schive (1995), Thorbecke (1979), and Galenson (1979) in their analyses of the agricultural and industrial development of Taiwan.

Taiwan shifted from a basically agricultural economy to an industrialized state in less than two decades (1952-1972) thanks to government policies of import substitution early in the 1950s and export encouragement later in the 1950s and during the 1960s. Initially Taiwan had an inward-looking economy with a heavily protected domestic market. This situation changed and by the 1970s Taiwan was more dependent on global economy. Exportation was promoted by loosening industrial regulations, providing tax incentives and building export processing zones. Additionally, there was adequate supply of power, land for industry, and transportation facilities. Direct foreign investment was also promoted (CEPD, 2005).

Crucial to this plan was Taiwan's effective use of its abundant workforce. By 1970, Taiwan was able to export more than half of its products due to the labor intensive nature of small and medium businesses and their capacity to respond rapidly to external changes. Foreign investment was also a source of employment at the time (Thorbecke, 1979).

Agriculture was key to the industrialization and economic growth of Taiwan by supplying workforce, capital, agricultural products, and a substantial market for non-agricultural goods such as farm machinery and fertilizers. This fact facilitated Taiwan's industrialization during the 1950s and the 1960s (Thorbecke, 1979).

Taiwan's population distribution was not seriously modified by rapid industrialization on the 1950s and 1970s. Even though, good paying industrial jobs attracted the surplus agricultural workforce the migration pattern stabilized and rural migration was not dramatic due in part to the balanced development of the agricultural and industrial sectors and the pattern of industrial development. People remained in the rural areas because agriculture also provided attractive wages (Mao and Schive, 1995). A significant increase in women working in the industry also benefited low-income

farm families (Mao and Schive, 1995). Some of the factors that contributed to keep people in the rural areas were good transportation services, widely spread industrial sites, and relatively small-scale operations with low capital intensity.

By the mid-1960's the agricultural sector began experiencing shortage of workers which brought about a rise in rural wages. Agricultural land became less available and the regulations designed to prevent land concentration prevented the increase of agricultural areas. Rural areas were affected by industrial as well as agricultural pollution (Mao and Schive, 1995). Agricultural imports posed strong competition for domestic products. In response, the government implemented structural changes in agriculture and reduced taxes to promote new investment in agricultural infrastructure and research and development.

After the first oil crisis hit in the early 1970s, rice production was promoted through a rice price support policy to reach food self-sufficiency and benefit farmers' incomes. As a result there was an overproduction of rice and a heavy drain on the government's budget. The policy was modified to limit the amount of rice purchased and encouraged a shift from rice to other crops through various incentives (Mao and Schive, 1995).

Taiwan's miraculous economic development success in the past four decades can be accredited to many factors but the most relevant was the strong and growing agricultural sector. Among the crucial factors to the role played by agriculture in the industrialization of Taiwan are (Mao and Schive, 1995):

- The land reform policies implemented in the early 1950s that created a social infrastructure favorable for development;
- The agricultural sector was a source of savings, foreign exchange, and surplus workforce for the industrial development;
- The agricultural sector was also a substantial market for the industrial products;
- Agriculture took the burden of import protection that benefited the industrial sector;²

² Agriculture shared the heavy cost of import protection beneficial to industry. Resources supplied by agriculture enabled the industrial sector to expand quickly, and agricultural growth helped maintain a balanced development between agriculture and non-agriculture and among regions.

- Agricultural products allowed the rapid expansion of the industrial sector;³ and
- Agricultural growth helped keep a balanced development between agriculture and industry which led to a more equitable distribution of income.

Developing countries like Honduras who are seeking to integrate agricultural and industrial development might look at the experience of Taiwan over the past decades to learn from the experience and perhaps apply similar models, policies, or institutions to assist in the modernization and adaptation of the agricultural sector so that it may contribute more positively to the efficient use of resources and greater economic growth.

7.3 Educational Development

Education has been widely viewed as one of the keys to Taiwan's modernization and a lesson for other countries to learn. According to Galenson (1979), education is just one of a number of variables contributing to economic growth. In the case of Taiwan, the improvements in the educational level of the labor force raised the productivity. Easy access to highly trained manpower may have been an important element in facilitating the rapid expansion of industrial enterprises in Taiwan.

Nevertheless, Galenson (1979) advises that education is by no means the most important factor for development and that there is no obvious relationship between the content of an educational program and its potential contribution to development. But some developing countries have faced serious obstacles to economic development caused by the lack of skilled manpower.

According to Tien (1996), Taiwan's policy towards education has borne fruit in the form of universal education and cultural enhancement. For the past forty years Taiwan has implemented a series of economic development plans. On almost education policies, especially those related to vocational training, have been led by economic goals.

Each economic plan has included different tasks for different stages of development. In the early stages of agricultural product exportation, highly skilled manpower was

³ It provided savings, foreign exchange, and labor for nonagricultural development and a large market for industrial products.

needed for the export processing zones. The goal at the time was set to satisfy the need of the labor-intensive plants by increasing the educational opportunities and extending the compulsory education cycle from six to nine years.

As Taiwan advanced from exporting agricultural products to industrial manufactured goods, the policy was to expand vocational training to respond to the needs of the developing industries. More students were geared towards vocational training than towards high school education. Unlike high schools that prepare students for college, vocational schools cultivate skills needed for the job market. To shift the economy from agriculture to industry, the education policy encouraged vocational schools and junior colleges to produce engineers and technicians, while schools in other fields such as agriculture was discouraged.

One interesting factor to be considered by other developing country is the role played by the private sector in vocational training. The pattern of vocational training adopted by Taiwan is a combination of efforts by the government and the private sector. Businesses also sponsor substantial on the job training.

As Taiwan's industries became more complex they demanded more technicians with advanced skills. When the vocational system no longer satisfied the needs of the market, university level institutions were created to generate manpower skilled in chemical and electronic engineering, textiles, and construction.

At the university level, the economic plan favored students in science and engineering, as opposed to the humanities. Again, such a policy was designed to complement goals in the area of industrial development.

More recently, as Taiwan advanced both economically and democratically, education policies have been less specific and the goals more general such as raising the quality of education and modernizing the curricula.

7.4 Summary of Possible Lessons from the Taiwanese Experience

According to Thorbecke (1979) Taiwan is a classical example of a developing country that used a unimodal development strategy based on the gradual progress of agriculture from the bottom up. Thorbecke identified five key elements of Taiwan's rural development that could be used by other developing nations:

1. The land reform program;

2. The integrated and comprehensive nature in which rural development was planned, coordinated, and implemented through the Joint Commission on Rural Reconstruction (JCRR);⁴

3. A choice of agricultural technology that encouraged an efficient use of available resources and crop diversification;

4. The set of policies and taxes that were used to transfer capital resources from the agricultural sector to the rest of the economy; and

5. The regional and rural decentralization of industrial development.

In terms of the first element, the land reform (Clark, 1987), some aspects may be applicable to other scenarios:

- The land reform was implemented in stages but in quick succession leading to the process being completed in only eight years;
- The land reform benefited almost all the farm families and shifted the sector from a landlord-tenant mode to a farmer-owner mode in a short period of time under the Land-to-the-Tiller Program;⁵
- The land distribution was fair in the sense that practically every rural family obtained some land;
- The gradual nature of land expropriation that resulted in lower land values; and the way compensation was handled that made land expropriation more acceptable to the landlords; and
- Immediate implementation of complementary policy measures including provision of credit, extension services, and strong organizational support in helping farmers associations and public investment in traditional agriculture.

⁴ JCRR was sponsored by the U.S. and aimed at modernizing Taiwan's agricultural system and at land reform.

⁵ Program of land redistribution from 1949-1953 that gave former tenant farmers secure, long-termed rights to the land they farmed.

Concerning the second element, the JCRR, the following aspects may be useful to developing countries trying to implement land reform policies (Thorbecke, 1979). JCRR was a semi-public institution initially created to handle the United States' assistance and funded by these same funds allowing it independence from the political sector and allowing it a long-term view of the agricultural development independent from the political influence. A similar organization could be established in other countries to channel bilateral and multilateral aid;

- The JCRR combined the planning function with implementation of research, extension and strengthening of farmer's associations; and
- It was operative at the local level, decentralized and unhampered by bureaucracy involving the farmers directly in the planning of local actions.

In terms of the third key element, the agricultural technology, Taiwan relied on an agricultural technology that maximized utilization of the available labor. At the same time, Taiwan used seeds and other inputs that were highly adapted to its climate and soil. Taiwan also utilized technology that suited its conditions as well making agriculture more efficient and productive (Thorbecke, 1979).

The fourth key element is the inter-sectoral transfer process in terms of magnitude and form. The net transfer as a proportion of total agricultural production, was 22% in 1950-1955 and around 15% from 1956-1969. This transfer played a key role in providing capital to the industrial sector in the process of economic development (Thorbecke, 1979).

The fifth and final key element is the process of regional and rural decentralization of industrial development which occurred at least from the mid 1950s on. It provided a way to absorb rural labor and improve the income of poorer farmers; it reduced the actual physical rural to urban migration because most of the rural workers commuted to the urban area but lived in the rural area. This inter-sectoral rather than geographical migration pattern might have been key to the success of Taiwan in achieving the multiple objectives of output growth and full employment, and a more equal income distribution. The topography of the island and its excellent railroad service might have been crucial to this goal but it does not reduce its applicability potential to other topographies (Thorbecke, 1979).

So far we have presented transferable experiences derived from the unique case of Taiwan. There are some particular aspects of the development process of this nation that are not applicable to other developing nations. For example, perhaps the most important factor was the immigration of more than half a million skilled workers from mainland China to Taiwan between 1947 and 1956. Among them was a group that had a clear idea of how agricultural development should be organized and implemented.

Another particular element was the substantial assistance from the United States from 1951-1965 which amounted to US\$1.4 billion. This level of assistance was unique and perhaps not replicable in other international scenarios.

Taiwan is a unique example of economic development and as we have discussed so far, some of the factors that were crucial to its success might not be transferable to other nations, other circumstances and other time frames. Nevertheless, we believe that there are aspects of Taiwan's development policies, structural organization, and visions that might be useful and worth exploring in more detail by policy makers in the developing world. Careful consideration must be taken to analyze the success of Taiwan within the particular circumstances in which it attained its economic growth and development before attempting to duplicate any of its strategies to other scenarios.

In the case of Honduras, effort to improve its agricultural sector could benefit from the experience of Taiwan. Rural and regional decentralization of the industrial development might prove useful strategies in the fight against rural poverty.

In terms of education, Honduras needs to look at the experience of Taiwan and how this country has continuously updated its education policies to adapt to the needs of the country and the advances of modern life. Education and training are factors that may affect the viability of improving Honduras competitive factors in view of the upcoming CAFTA agreement and other globalization movements.

The parallel educational and economic policies that have characterized Taiwan's development are a particular lesson to be learned by countries like Honduras that have limited economic resources but a large and young population lacking appropriate training. If the educational goals take into consideration the economic goals of the country the resources might be better used in the fight against poverty and the social and economic development of the country in general.

7.5 Summary

In conclusion, even though the experience of Taiwan is unique and most of the factors that played a key role in the economic development of Taiwan are obviously non-transferable, the emphasis Taiwan has placed on equitable agrarian reform and widespread education are two useful strategies that Honduran policy-makers can incorporate more fully into the Honduran economic development strategies. Education is one of weakest elements in Honduras society. Our education model needs urgent reform and strengthening. Our growing population needs access to modern and realistic education system to overcome its vicious cycle of poverty, unemployment, and lack of opportunities. In addition, agrarian reform is another aspect that needs modernization and fair distribution. Our allotment of arable land is limited and the number of landless peasants is rising and therefore the land distribution system is in need of changes that incorporate factors such as gender, minorities, and fair titling to all those that are willing to incorporate themselves into the effort to combat poverty and increase economic growth.