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## Policies and Mechanisms on Land Value Capture: Taiwan Case Study

Land value in Asian cities has significant implications for the progress of economic growth. As a significant living cost factor for a city's residents, land value often affects a government's social and political agenda. As a significant cost factor for industry, land value affects long-term investments for production and profit competitiveness. This research studies the magnitude of land and housing price increases in Taiwan and tries to learn what the government could do to capture and share the profits created by the so called "unearned income" from land value increases.

Taiwan was selected for this case study for several reasons: 1) the examples of land value increase were significant over the past forty years; 2) the cases were not unique among Asian cities; and 3) a unique taxation system developed according to the constitution would be of interest to many countries dealing with land value increase and value capture.

### Land Price Increase in Taiwan

Taiwan is one of the most populated areas in the world. The population is over 21 million, and the total land area is about 36,000 KM<sup>2</sup>, or 14,000 square miles. Over 51.5 percent of the land is mountainous and almost uninhabitable. Due to population growth and economic development, the demand for land to be used for residential, commercial and industrial purposes has become intensively high during the past three decades.

Housing prices in Taipei City, the capital city of Taiwan, went up almost 25 times (Table 1) from 1970 to 1993. The most significant increase occurred from 1985 to 1990 when housing price went up almost five-fold, while the national income increased only two and one-half times. During the 1980's, housing prices went up much faster than the increase in per capita income<sup>1</sup>.

**Table 1: Housing Price Index and Economic Growth in Taipei (1970 = 100)**

| Year | Housing Price Index* | Per Capita Income** |
|------|----------------------|---------------------|
| 1970 | 100.00               | 100.00              |
| 1975 | 225.21               | 247.22              |
| 1980 | 589.08               | 598.61              |
| 1985 | 537.82               | 831.11              |
| 1990 | 2621.85              | 2059.17             |
| 1993 | 2477.99              | 2742.22             |

**Source:** \* Housing Price Index from Huang, S.H., Evaluation and improvements of Taiwan's Land Value Increment Tax, (in Chinese), Hwa-Tai Books Co., 1995

\*\* Per capita GNP compiled by author from Taiwan Statistical Data Book 1997

Since 1970, land prices have increased substantially through three major cycles. The first market cycle occurred from 1973 to 1975. During this time of the first energy crisis, land prices increased nominally by 31.1 percent, 24.9 percent and 21.3 percent respectively. This increase was offset by high inflation rates caused by the crisis of import oil. In the same period the consumer price index (CPI) also increased substantially. In 1974, for example, housing prices actually fell by 10.98 percent in real terms.

The second price increase happened between 1979 and 1980; the price of housing increased by 41.9 percent and 53.4 percent and the CPI increased by 7.8 percent and 19 percent respectively. This significant upward cycle lasted only two years. Beginning in 1981, housing prices started to fall, but the CPI continued to increase by 16 percent. The downward cycle of housing prices remained low throughout the 1980s until 1986.

The most serious skyrocketing price increases in housing started in late 1986. Prices increased 79.9 percent and 65.9 percent respectively in 1987 and 1988. The CPI increased only 0.5 percent between 1986-1988, and increased 8.7 percent between 1988-1990. Therefore, the relative prices of land, housing and other goods significantly changed during this period.

The efficiency of the economic system in major cities was the major driving force behind the rising land prices. Individuals and institutions from public and private sectors gained access to the land market and learned how to invest as well as to speculate. In the capital city of Taipei, for example, the land price increase in the urban fringe areas was higher than the price increase inside of the city. Even the price of agricultural land in remote areas was driven up to an unreasonably high level. Rising agricultural land prices made continuous farming unprofitable.

As land prices continued to move upward, the consequences of this trend began to affect many aspects of the economy at both the micro and macro levels. Long-term impacts on government efficiency, public and private investments, and income distribution have evolved into critical political and social issues in recent years.

### **Causes of High Land and Property Prices**

Increases in the price of land are primarily attributed to the island's rapid economic growth. Per capita income grew from US\$192 in 1955 to US\$11,315 in 1995 (see Table 2.) The agriculture sector shrank from 29 percent of total GDP in 1955 to 3.5% in 1995. Economic structural change and population and income increases all had direct influences on the demand for land. In addition, strict land use policies and ineffective tax policies that were incapable of regulating land supply and discouraging speculation gave further inducement for land prices to move upward.

**Table 2: Taiwan's Economic Growth**

|      | <b>Per capita<br/>Income US\$</b> | <b>Saving/<br/>GNP (%)</b> | <b>Agriculture/<br/>GDP (%)</b> | <b>Industry/<br/>GDP (%)</b> | <b>Service/<br/>GDP (%)</b> | <b>Trade Balance<br/>(US\$M)</b> | <b>Gini<br/>Coefficient</b> |
|------|-----------------------------------|----------------------------|---------------------------------|------------------------------|-----------------------------|----------------------------------|-----------------------------|
| 1955 | 192                               | 14.6                       | 29.1                            | 23.2                         | 47.1                        | -78                              | N/A                         |

|      |        |      |      |      |      |        |              |
|------|--------|------|------|------|------|--------|--------------|
| 1965 | 203    | 20.7 | 23.6 | 30.2 | 46.2 | -106   | 0.323 (1966) |
| 1975 | 890    | 26.7 | 12.7 | 39.9 | 47.4 | -643   | 0.312        |
| 1985 | 2,992  | 33.6 | 5.8  | 46.3 | 47.9 | 10,624 | 0.290        |
| 1995 | 11,315 | 25.8 | 3.5  | 36.3 | 60.2 | 8,109  | 0.318 (1994) |

Source: Taiwan Statistical Data Book, 1996, Council for Economic Planning and Development

## 1. Land Policy and Economic Growth Objectives

Economic policies have been closely related to land policies in Taiwan for the past forty years. With scarcely available land for a rapidly growing population, land has been a highly demanded source for many competing purposes.

The first example of integrating land policies into economic policies happened in the 1950s when agriculture production was the primary source of income. Government's top priority was to raise farmers' income and to balance income distribution between landlords and tenants. A land reform program was implemented to reduce rent for tenant farmers, to redistribute land, and to release public land to farmers. The land reform program not only improved agricultural productivity, but also diverted extra income from landlords into industrial investments.

The land reform program, enabled by the Statute of Equalization of Land Right, 1954, had achieved both economic and social objectives. The Act encouraged private and public land to be sold to tenant farmers. Once a tenant received the land, secured tenure gave incentives to raise productivity as well as income. On the other hand, original landowners who had sold their land to the tenants received payments which were diverted into industrial development. Both the landlords and the tenants benefited from the land reform program for many years. This successful land policy built a solid foundation for future economic development.

## 2. Tax Policy and Social Equity Objectives

In the 1960's, land taxation and urban land management systems were formalized to stabilize revenue sources and to manage urbanization. Land became a competitive and scarce resource and land speculation began to cause political and social concerns. The 1954 Statute of Equalization of Land Rights set the foundation for land taxation in four areas:

- 1) fair assessment of land value;
- 2) taxation according to declared value;
- 3) government optional purchase at declared value; and,
- 4) public enjoyment of future land value increment.

The Equalization of Land Rights set the guidelines for Taiwan's land taxation law. The land tax law was passed in 1977 to give enforcement power to collect local revenues. The tax law defined the revenue base and the rates of Land Value Tax (LVT) and the Land Value Increment Tax (LVIT). These two types of taxes were developed to establish local revenue bases and to affirm the capacity to capture land value gains. Although the Land Tax Law was

developed as a revenue tool, its implementation had strong implications for the social equity issues emphasized in the Statute of Equalization of Land Rights. The ambiguity of two different policy objectives left tremendous opportunity to interpret the law's implementation in different ways. Consequently, using LVIT to control speculation was proven to be ineffective, and, in many cases, was criticized as a failure by scholars and the general public.

### 3. Inflexible Land Supply and Ineffective Value Capture

In the 1970's after the energy crisis, a national land planning system was developed to regulate land use for better living quality. Urban and non-urban lands were regulated for economic needs. Urban land was regulated by the Urban Planning Act of 1973 (first enacted in 1964) and non-urban land was regulated by the Regional Planning Act of 1974. Special import and export zones were established to facilitate international trade. Taipei City introduced a vacant land tax in 1968 to control speculation, but the tax was later abolished in 1974 due to the world recession

In the 1980's, economic growth was rapid and personal wealth grew significantly. Per capita income grew from US\$890 in 1975 to US\$2,990 in 1985. Personal saving reached its highest point in the mid 1980's (Table 2) due to successful foreign trade. To balance economic growth and living quality, environmental programs were initiated. Infrastructure investment continued to increase and environmental review processes continued to be strict. Policies to increase infrastructure investment stimulated land development and land prices. Strict environmental review processes limited land supply which also triggered land price increases. The ineffectiveness of the LVT and the LVIT fairly capture the profits from land sales further encouraged land speculation. To remedy the LVIT deficiency, the level of assessed land values were adjusted to be closer to market values. In the 1980's, land value had become a major cost of industrial production.

The slowdown of the world economy in the late 1980's forced Taiwan to put together a stimulus plan in the 1990's that could attract private investment and raise world trade competitiveness. Land policies to loosen up urban land regulations for more flexible land supply were carried out. Land development processes became less stringent. Special districts in urban areas were identified to provide even more flexibility for land use. As the increase in land prices slowed down, revenues from LVT and the LVIT consequently decreased. During this period, because of the effort to establishing local autonomy and the lack of inter-governmental funds from the central government, new revenues sources at the local level were explored. Special land development projects with negotiable developers' contributions were applied to urban and non-urban cases.

### 4. Private Capital Investment

A trade surplus took effect on the domestic economy in the late 1970's. Increasing private capital formation resulting from an international trade surplus was injected into the land market and drove land prices up. The foreign trade reserve of Taiwan has been among the world's highest. With limited channels for private investors to invest in the stock market or other

businesses, private funds flew into the land market. Besides, purchasing land and housing to pass from one generation to another had been an important tradition in Taiwan. With enough cash reserves, entering the real estate market became a high priority for everyone.

## 5. Money Supply

Taiwan's central bank's money supply was a unique contributing factor to high land prices. Comparing the cyclical behavior of land price movements, money supply played a consistent role in the cycles. According to the results of several studies, the change in the growth rate of the money supply was the major cause of the skyrocketing increases in land and housing prices. A study shows that when M1B<sup>2</sup> increases 1 percent, housing prices will increase 0.9-2 percent in the following year. M1B generally refers to the net currency of all sectors besides financial institutions plus saving deposits. From the available data, the periods of high growth rates of M1B did coincide with periods of high growth rates in housing prices, with a lagging period. The high growth rates in the money supply were caused, to a large extent, by Taiwan's large trade surplus and the government's mismanagement of macro-economic and monetary policies.

If land speculators have easy access to bank loans with low borrowing interest rates, the money supply will further fuel land prices to move upward. If the banking industry actually participates in land investment, the oversupply of money in the land market will create an even more extraordinary effect on prices. As mentioned earlier, one of the most significant land price boom cycles was between 1986 to 1988. Prices increased 79.9 percent and 65.9 percent respectively in 1987 and 1988. The money supply annual increase rates were 51 percent (1986), 37 percent (1987), and 24.4 percent (1988). Compared to other Asian countries, Japan's money supply annual increase rates were 10.4 percent, 4.8 percent, and 8.6 percent for the same period while Singapore's rates were 11.8 percent, 12.3 percent, and 8.4 percent<sup>3</sup>.

Public demand or government policies on monitoring the role of money supply in land market operations have seldom been publicly debated. Bank reserves, rediscount rates, and bank deposit interest ceilings are some of the measures that were overlooked by government and the public to control land price inflation in a rapid economic growth period.

## 6. Social Changes

Social and family structure changes also affected the demand on land and housing. The growth in the population and a trend toward smaller households, coupled with a rising level of disposable income further triggered the demand for residential land.

## 7. Personal Saving

Personal saving is one well-known factor affecting land and housing prices in Asia. Purchasing land and real properties requires sufficient amounts of capital for down payments. Personal savings is the major source of down payments used to enter the land market. The saving rates<sup>4</sup> began to climb as the economy started to grow in the 1950's. The savings rate reached its highest point in mid 1980s (33.6 percent of GNP in 1985 and 38.5 percent in both 1986 and

1987.) After the 1986-89 cycle of skyrocketing land prices, the savings rates declined from 1990 to 1993 (Table 2.)

## 8. Land Use Regulations

Land use regulations are primarily designed to maintain a safe and comfortable living environment. They can become powerful tools to control the supply of land when used to limit the types, the intensity, and location of certain land uses in urban areas. Strict land use rules are often directly associated with the inflexibility of land supply. As economic structures change rapidly in cities, new land use regulations will be needed to facilitate new economic activities. Strict regulations inhibit new land uses which will means less land will be available to meet new demands from new activities.

Another example of land use regulation is agricultural land conversion and urban fringe development. In Taiwan, agriculture production reduced its role in the GDP from 29 percent to 3.5 percent in recent decades. Land for agricultural use has not been able to convert flexibly to support the need for industrial and urban uses. The need for allowing land to be used for urban activities is strong. On the other had, idled agriculture land has not been able to support the need in urban areas. Such regulatory constraints prevented an effective land supply system in the city and suburban areas. As a result, illegal and informal conversions of land use became the most profitable channel to accumulate wealth. Such illegal or informal speculation on land values and the unaccountable loss of government revenues caused critical economical, political, and social tension.

## 9. Infrastructure Investment

Infrastructure investment creates impacts on both the supply and demand sides of the economy. Infrastructure projects have been used as a major economic revitalization strategy in Asia. There are positive effects both on GDP and private capital formation. For Asian cities, the most significant impacts are related to land value increase.

To stimulate economic growth, the government in Taiwan launched “Ten Major Construction Projects” in 1978. These projects included all aspects of transportation facilities such as highways, airports, railroad systems, seaports, etc. These projects were later expanded to enhance the domestic and international transportation network. The impacts of these infrastructure projects on land value were phenomenal. Between 1978 and 1986, government assessed land prices “increased by 500 percent in Taipei City, 460 percent in Kaoshiung City, and 350 percent in Taiwan Province.”<sup>5</sup>

To speculate on land value increases, developers often make early moves to acquire specific sites that have strategic location features related to infrastructure projects. They may acquire the site that is needed for the infrastructure itself (i.e.; a right of way.) so that government has to compromise with significant amount of money to purchase the land for the public project. They may also purchase sites that have strong commercial potential (such as a subway station shopping complex) after the completion of the

infrastructure project. In either case, a small group of private developers benefit notoriously from large-scale public investment.

Such speculations significantly increase the costs of an infrastructure project. In recent years, land acquisition cost has become the major item of public infrastructure expenditures. It is not unusual that land acquisition can attribute more than 50 percent of the total cost of building a roadway.

#### 10. Manipulation of Market Value by Developers

Market value can be artificially manipulated through false transaction values. One mechanism is for a developer to transfer property ownership among corporate subsidiaries with a highly inflated price. The inflated transaction price becomes a false indicator to the real market values for the adjacent properties. The developer then sells the adjacent properties to the general public based on the false market value. The capital gains from the latter transactions could be written-off by the first transaction between the two corporate subsidiaries. There would be a very limited capital gains tax nor the Land Value Increment Tax (LVIT) applied to these transactions. And it is complicated to trace the detailed transactions either within the corporations or with the general public. For a developer who owns a large amount of land in the city, manipulating the market value is a common practice. Current tax laws are not effective to capture such gains.