

A comparative study on urban land use planning system between China and Taiwan

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Abstract

This paper compares the urban land use planning mechanism that operates within Taiwan and China. In contrast to Taiwan's policy of private land ownership, all urban land belongs to the state and land use rights are different from land ownership in China. This study revealed that although planning systems in Taiwan and China are different from each other, both confronted challenges in pursuit of sustainable urban development. China needs to devote much attention to the environmental and to public participation issues. The dual land use system and the coordination between master and detailed plans needs to be improved in China. Taiwan faces the challenges of coordinating zoning and development permit systems, more equitable compensation schemes, and more public participation in the planning process. The study suggests that coordination between tiers of government, transparency of decision-making procedures, accountability or liability of the decision-makers and an enforceable regulatory framework are also needed both in Taiwan and China.

1 Introduction

In the democratic world, most land is owned privately and trading is freely allowed. Therefore, without land use planning, land would be apportioned between competing uses by the price mechanism and the interaction of supply and demand. But the mechanism of the free market can cause ill-conceived and short-sighted ways, which may create almost insurmountable problems for generations to come. Land use planning has considered as necessary schemes for governments to manage urban lands. Since 1980, a growing awareness of sustainable development in the world has sought to adopt policies on sustainability in many topic

areas. Land use decision-making is an important arena within which a balance may be struck among economic development, environmental protection, and social justice; therefore, land use planning can play a vital role for sustainable urban development.

In the past forty years, Taiwan has experienced great economic growth and has been called one of the "Four Asian dragons". Like many democratic countries, zoning is the most important scheme for Taiwan's government to control land use. China is a communist country having a different system for land use and land management. Because of ever-accelerating economic growth since late 1990's, the developments of large cities in China, such as Shanghai, have caused a lot of attention worldwide. The main purpose of this study is to compare the land use planning systems between Taiwan and China. Special attention is given to the role of land use planning in delivering sustainable urban development in Taiwan and China. The main content of this paper will include the background of Taiwan and China, the review of the schemes of urban land use and management in Taiwan and China, and the issues of urban land use planning to deliver sustainable development in urban areas.

2 The idea of sustainable urban development

Reviewing the literature, we find that sustainable development means different things to different people in different places. Some are focused on environmental management with as little negative impact on economic development as possible; some are focused on economic development with as little negative impact on the environment as possible (Kamara and Kargbo, 1999). The 1992 Rio Earth Summit has declared the Agenda 21 and has demonstrated that ensuring a right of access to information, education, redress and remedy, and the full participation of women, youth and indigenous people and their communities and local communities are important elements of sustainable development. Agenda 21 also raise the profile of urban issues including a range of issues including the role of rapid urbanization, access to affordable, tenured land by the urban poor; availability of environmental infrastructure and services; natural disaster management; and capacity building, and the indication of the key role of local authorities in making sustainable development happen (Allmainger and Chapman, 1999). Accordingly, the concept of sustainable development covers not only environmental goals, but also social goals such as greater equality and active public participation in decision-making. Sustainable development is also recognized as connecting local and global perspectives, providing a focus on protection of both the physical environment and human population, serving the goals of gender equity, and providing ways to integrate social and economic development (Gamble and Weil, 1997). Among various definitions of sustainable development, Berke and Manta (1999) have provided a clear definition as follows: sustainable development is a dynamic process in which communities anticipate and accommodate the needs of current

and future generations in ways that reproduce and balance local social, economic, and ecological systems, and link local actions to global concerns.

3 The background of Taiwan and China

3.1 Taiwan

Taiwan is an island in the Western Pacific Ocean that lies off southeastern coast of the Mainland China. Its total area is 36,006 square kilometers. The population was about 7.5 millions in 1949; it was over 22.2 million by the end of 2000. The urban planned land area is 12.3% of total area, but the population in urban planned districts is 77.9% of total population. Because the mountains rise straight out of the sea on Taiwan's east coast, while the west side of the island is a flat and fertile plain, over 90% of the population resides on the west side. The Capital City, Municipal City of Taipei, is the biggest city in Taiwan that has a population of 2.64 million people and the population density has reached 9,737 persons/km² by the end of 2000.

In 1949, the communists took control of the Chinese mainland from the Nationalist Party (KMT); the Nationalist Party fled to Taiwan and declared that Taiwan is the base of the nation of the Republic of China. Although the Nationalist Party hoped they would retake Mainland China from the communists, the dream never came true. In domestic Taiwan, The Nationalist Party had repaired Taiwan's war-worn economy very quickly. A land reform program was introduced in 1950s that resulted in a more equitable income distribution than is found in most Asian countries. Rapid industrialization in the 1960s made Taiwan one of the wealthiest economies in Asia (Storey, 2001). The annual per capita income has risen from US\$420 in 1951 to over US\$12,000 in 2000. Before 1980s the label of "Made in Taiwan" was associated with cheap products, but it has moved into high quality electronics and computers since the end of 1980s. In 1999, the Democratic Progress Party won the presidential election and Shen-Ben Chen became the first president who is not from the Nationalist Party.

3.2 China

China is the third largest country in the world, after Russia and Canada, and has an area of 9.5 million square kilometers. The population was 452 million in 1949, and it was over 1.26 billion in 2000. Officially, only 30% of the total population is classified as urban. The huge population has to be fed with the produce of around 15% to 29% of the land they live on. The southeastern area is 36% of the total area, but has over 90% of the total population. Shanghai is the biggest city in China and one of largest in the world. The population of Shanghai was over 13.13 million and the population density was 2071 persons/km² by the end of 2000.

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In 1949, Mao Zedong established the People's Republic of China and Beijing was selected as the Capital City. Under the Mao and communist rule, China cleaned itself of foreign influence. Mao embarked on a period of radical agricultural reform. By 1956, agriculture has been collectivized. Next came the Great Leap Forward of 1958–1960 and the Cultural Revolution in 1966, that resulted from Mao's impatience with agriculture reform and also had caused million of people to be killed by those policies. Mao had talked of economic development, but China slid further back during his violent and chaotic reign. In 1976 Deng Xiaoping moved quickly to consolidate power after Mao's death. He announced the first of a series of economic reforms in 1978. China's exports were \$9.75 billions in 1978; it racked up exports of \$250 billion by 2000. China accounts for 4% of world trade and ranks as the world's seventh largest exporter (Panitchpakdi and Clifford, 2002).

4 The urban land use regulations in Taiwan and China

4.1 Land policy

4.1.1 Taiwan

In the early 20th century, Dr. Sun Yat-Sen (Father of the Republic of China) held that land was the gift of nature to all people and should be enjoyed by all and preempted by none. He advocated private ownership of relatively small lots, but he also advocated a system that would tax away the whole profit from speculation in land. This philosophy has become the foundation of Taiwan's land policy and the "equalization of land rights" is the fundamental national policy of Taiwan. In order to achieve the goal of "maximizing land utilization" and "bringing the public to share the benefits thereof", the government regulate land value and take hold of land value fluctuation to facilitate taxing and purchasing of land according to its value and giving the value increment to the public.

4.1.2 China

Unlike Taiwan's private ownership of land policy, the 1982 Constitution of China declared that all urban land belongs to the state and transactions of land ownership were illegal. The government adopted the policy that land use rights are separate from land ownership. Land users need to lease land from the government. The state monopolizes all sources of land supply for urban development. The premium of land leasing became an important source of government revenue. China also adopted a dual land use system that involves both market and non-market mechanisms, while most of the land is allocated to state enterprises and infrastructure projects through the administrative method, a portion of land is allocated through land leasing. The state choice municipalities as the representatives to

deal with the transfer of land use rights, the municipal land administration bureau takes charges of land allocation and transfer of land use rights (Yeh and Wu, 1999).

4.2 Urban land use plan making and approval process

4.2.1 Taiwan

The Taiwan's Urban Planning Act declared a goal of "improving citizens' living environment and fostering balance development between cities and towns" (Article 1). It regulated that an urban planned district should draw up a master plan and a detailed plan map and plan specification. The master plan is a 25 year long-term development guideline for the development of urban planned districts and should be reviewed every 5 years. The Act requires the master plan should specify the boundary of the planning area, population trends, social and economic conditions, land use allocation, schools and large public facilities, main roads and public transport network, preservation area, financial plan and stages of implementation (Article 15). The detailed plan represents further details to the master plan that include the amount and density of population, land use control rules, road systems, land use for local public facilities, and financial plans (Article 22). According to the Act, urban plans have been categorized as city plans, town and country plans, special district plans. Zoning is the mechanism for land use control, while land re-adjustment, block compensation land collecting in addition to compulsory land collecting are methods for land acquisition by public facilities.

There were three levels of urban planning commission including central, city (county), and township in Taiwan. The provincial level was deleted in July 1999 because of organizational restructuring. According to the regulations, every plan needs to be sent to a local urban planning commission and higher levels of urban planning commission for examination and approval. For instance, a township plan needs to be sent to a township urban planning commission, county urban planning commission, and the urban planning commission of the Ministry of the Interior. The urban planning commission includes a chairman, a vice-chairman, and 12–20 commissioners. The chairman could be mayor (city level), governor (county level), or Minister of the Interior (central level); and the chairman appoints all commissioners. The urban planning Act required that the Urban Planning Commission should examine and approve every master (detailed) plan map and master (detailed) plan specification and every plan need to be publicly display for 30 days. If any citizen has different opinion, he can send suggestions to the urban planning commission by written statement. The urban planning commission must decide whether to accept citizen's statement during the required period. The Urban Planning Commission also entitled to make changes to an approved master plan without informing the general public.

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Taiwan adopts a regulatory development control system in which land use zoning plans are employed to guide private development. Because of the inflexibility of zoning, the development permit system was introduced in recent years. Since the early 1990s, several ordinances were introduced to provide rules for the developers or landlords to apply to land use change, such as from agricultural to residential districts, from industrial to residential or commercial districts, and from conservation districts to other uses.

4.2.2 China

The City Planning Act of China has been effective since April 1990. According to the Act, the purposes of urban planning are to “identify the scope and the development direction of a city, to reach the goal of economic and social development of the city, and to prepare rational city plans and carry out constructions to meet the needs of socialist modernization” (Article 1). Similar to Taiwan, the Act requires master and detailed plans. However, unlike the clear relationship between master plan and detailed plan in Taiwan, China’s master plan is required to outline the general land use pattern of the city, while the detailed plan is prepared for the various construction projects within the short-term development area of the city (Article 19 and Article 20). The master plan is usually a 20 year plan which is considered as a long-term development strategy. The detailed plans include many types of plan such as residence, city-square, and open space, recreation center plans. Although the master plan is considered as a long-term development strategy and illustrates future land use with a land use map, the master plan’s categories are too general to be followed in preparing a detailed plan. Since the late 1980s, schemes of urban district planning, detailed development control planning, and zoning were introduced in different cities in order to strengthen planning control and to help a better coordination between master planning and detailed plan.

The master plans of municipalities under the direct jurisdiction of the State Council should be submitted by the municipal government to the State Council for examination and approval. The detailed and districts plans of a city are examined and approved by the city government (Article 21). The city government is also entitled to make partial adjustment to the master plan of the city and the amended master plan should be submitted to the standing committee of the People’s Congress of the corresponding level and to the previous approval authority to be put on record (Article 22). According to the Act, the land use and all development projects within the urban planning area should conform to urban planning and are submitted to planning administration. The location and layout of construction projects within urban areas should conform to urban planning and the approval design assignment should attach the site-selection note issued by the planning administrative authority. The Act requires that the developer or individual have to acquire the land use plan permit, then they can apply for land use to the local government above country level (Article 31).

5 The issues to achieve sustainable urban development

5.1 Land use control

In the urban planning system, land use planning is a key point of reference in sustainable urban development. Land is effectively the infinite resource on which all else depends, while most activities are placed on development planning to achieve or deliver sustainability. However, in Taiwan, land use planning is a political medium for vested interests and only controls direct physical change with little influence for relative trends or pressures. Zoning is a technique that has been used for land use controls representing other problems. Zoning in some ways is effective, but it lacks flexibility and it also creates social equity problems. Although the development permit system was introduced to be more flexible for urban development and also to provide the payback compensation schemes to take away the windfall profit from the land changes, the equity problem remains the same. In addition, the development permit system represents a trend from blueprint planning to project planning, but lacking coordination between zoning schemes and development permits in land use planning system is an issue to be conquered.

In the dual land use system in China, a large portion of land is allocated through administrative methods, while some lands are bargained for under the land leasing system. Because of inter-city competition, the land market is a constrained market, but the different land prices through different land allocation methods often led to a black market and created struggles between municipalities, developers, and existing users (Yeh and Wu, 1999). Recently, it has been advocated that the introduction of zoning could make land use planning more operational and more reasonable to land developers in China. However, the problem of incorporating zoning into existing urban planning system is also raised.

5.2 Public participation

Agenda 21 recognized that environmental and social changes would need to be stimulated at a local level. The encouragement of fostering public participation is the main element. However, the notion of participation in Agenda 21 goes beyond the usual forms in the current planning system in Taiwan. According to the urban planning regulations, the current form of participation is centered on eliciting people's views. Often, not until the explanation meeting and display of the plan, people have no idea of the content of the master and detailed plans. In recent years, because the citizens have become more active in protecting their land rights, many planners have also used public hearings and questionnaire surveys to collect citizens' opinions.

A channel for public participation does not exist and it has no real meaning because the negotiations take place among government agencies in China. Lack of public participation means land users don't have any information about the restric-

tion for the development intensity of their land parcels. The users have been forced to use both formal and informal means to bypass the plan or to twist the planning decision (Yeh and Wu, 1999). Public participation is considered to help ensure the legitimacy of land use planning system in Taiwan. However, legitimacy of planning has been ensured by public ownership and state control in China. Legitimacy can be established through power; no matter it is economic or political. But, when the global trend is to respect human rights and to pursue sustainable development rather than economic growth, sufficient public participation is an important factor to make better land use planning in China.

5.3 Environmental protection issues

According to statistics of the Council for Economic Planning and Development, among 443 Taiwan's urban planned districts, only 31 urban planned districts meet the requirement of allocating 10% of total land areas as open space by the end of 1999. Data also showed 69% of urban planned districts allocated fewer than 3% of land for parks and open space. In addition, although the environment impact assessment was required for the application of development projects, the urban planning review does not need to do EIA. The tension among spatial planning, economic development, and environmental concern of land use presents a challenge for Taiwan.

Due to the economic reform and the open door policies, the rapid growth of cities has caused the loss of valuable land resources and has aggravated the inadequate urban infrastructure in China. In addition to the urbanization, the chronic water shortages in the northern cities of China, the yearly dust storms, and acid rain caused by heavy use of coal as energy, are also serious environmental problems in China. Unfortunately, from the newly announced "The 10th Five-Year Plan (2001–2005)" of China, the government still puts priority on urban and economic growth rather than control of land use that not only leads to further environmental degradation, but also jeopardizes the long-term sustainable development in China.

6 Conclusion

Sustainable urban development is a challenging concept to implement, as it requires difficult decisions to be made as well as consideration of multiple issues. Land use planning clearly has a major role in working towards sustainable development. Reviewing the urban land use planning systems in China and Taiwan, this study finds that each place has adopted different policies because of the political and administrative milieu under which it has operated. This study also finds that although planning systems in Taiwan and China are different from each other, the challenges confronted are similar. China needs to devote much attention to environmental and public participation issues. The dual land use system and the coor-

dination between master and detailed plan also need to be improved in China. Taiwan faces the challenges of coordinating zoning and development permit systems, more equitable reward schemes, and more public participation in the planning process.

The effective way to pursuit sustainable land use planning does not lie solely in employing new policy techniques or technological advancements. It is about the political courage needed to use the policy techniques to make sustainable actions more attractive for individuals, businesses, and institutions. Sustainable urban development cannot be achieved without profound institutional change. The key tools available to make land use plans more feasible, both in Taiwan and China, include coordination between tiers of government, transparency of decision-making procedures, accountability or liability of decision makers and an enforceable regulatory framework. In addition, the contribution of every citizen is needed to mediate urban problems and to create a vision for a sustainable future. This is increasingly realized in democratizing Taiwan, but seems to be a challenge in the case of China. A better land use control system and environmental assessment methods also urgently need to be developed and to be used in rapidly growing cities in China.

Since 1949, Taiwan and China have been in rival situations. The China government always claims Taiwan is part of China, while Taiwan persistently states that Taiwan is an independent nation in reality no matter what China's declaration. Because of this situation, very few studies compared issues between China and Taiwan in the past. It is hoped that, through this comparative analysis, both can broaden the sense of possibility and provide a framework for better understanding between China and Taiwan. It is important to note that because many residents' ancestors came from China and both nations use same formal language, more and more people have gone to China for visits and investment since early 1990. Many cities in China provided various incentives to attract investment from Taiwan in the past decade. According to semi-official sources, information technology exports from Taiwan invested factories in China amounted about 40% of China's total electronics exports (Panitchpakdi and Clifford, 2002). On September 2001, both Taiwan and China were agreed to join the World Trade Organization (WTO). It is believed that entry into WTO will facilitate the closer relationship between China and Taiwan, and it will accelerate Chinese domestic reforms and make Taiwan more comparative. It is also expected that, under the trend of globalization, future evolution of the role of land use planning mechanism in pursuing sustainable urban development could be improved in both nations.

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