

Title	Institutional efficiency between public and private governance: A Case study in Taiwan
Keywords	homeowners associations, industrial parks, institutional evolution, Taiwan, New Institutional Economics, property rights
Author (s)	Simon, C.Y., Chen, Jeng-Wen Lin
Address	100, Wenhwa Rd., Seatwen, Taichung, Taiwan, 40724
Telephone	+886-4-24517250*4705
Fax	+886-4-24517560
Mobile	+886-961100855
E-mail	cyuan@fcu.edu.tw
Paper no.	019

INSTITUTIONAL EFFICIENCY BETWEEN PUBLIC AND PRIVATE GOVERNANCE: A CASE STUDY IN TAIWAN

Abstract:

The rapid increased development of gated communities recently attracts many academic interests. Most of the researches focused on residents' opinions living in gated communities or debating the role of the homeowners associations (HOAs). However, there is no similar research except residential area which may narrow down the influence or the impact come from this new urban private governance. This paper investigates the HOAs in the industrial parks and analysis the differences with the residential counterparts. In Taiwan, private developers created a new kind of industrial park, the factory-office buildings (FOBs) – which are similar to condominiums in residential districts and governed by (HOAs) - but tailored for industrial companies' needs and demands, especially for small and medium enterprise in which their demands were ignored by government. In this paper, I will review the development of government-led development industrial parks (GDIP) and FOBs in Taiwan and investigate the case of NangKang Software Park (NKSP) which is the largest FOB in Taiwan and developed through GDIP system. I examine the evolution of regulations in NKSP and compare it with other GDIP's, which indicate that because the property management company faces pressure from a competitive market, it is forced to improve its services and efficiency resulting in the HOAs' ability to buy better public services than other GDIPs at a lower cost. This may justify that private urban governance in the commonhold ownership structure such as the HOAs is institutionally superior to the conventional urban governance which is dominantly managed by municipal government.

INSTITUTIONAL EFFICIENCY BETWEEN PUBLIC AND PRIVATE GOVERNANCE: A CASE STUDY IN TAIWAN

Introduction

The attempt to correct market failure through government intervention by comprehensive land use plan based on rationalism in 1970s and 1980s proved to be unsuccessful because planners cannot have perfect information and knowledge to complete a comprehensive plan. Even that planners can overcome the information problem, they still cannot avoid the influence from interest groups (Campbell and Fainstein, 1996). Moreover, public choice school provides the insights in pointing out that the inherent problem in government intervention is that the agents in the government are not impartial and benevolent but pursue self-interest as people do in the market. They pursue their career advantage, expanded budgets, and position. In the public sector, there is typically no or a little competition or accurate information, such as price and profit and loss accounts for guiding the direction of redesign or for correcting errors or constraining competition for expanding bureaux sizes and budget. This tendency will be exacerbated in the long-term since the public sector may gradually evolve and lock-in to a *path-dependent* trend towards *leviathan* and inefficiency (Olson, 1982, 2000; North, 1990). Pennington (2000) uses the British planning system to demonstrate that planning policy is driven by politically oriented concerns and planning bureaucrats have strong incentives to support those policies that will expand the size of the planning agency.

While the land use planning shifts the focus on more incremental and advocacy way to resolve the problem of getting 'right' information of public interests, market may provide the solution. This is the common interest developments (CIDs) such as condominiums and planned development of private communities' where residents have freehold with their units and common facilities are commonly shared and governed by homeowners associations (HOAs). The number of units in these privately governed residential club rose rapidly from 701,000 to 16.3 million from 1970 to 1998 (Mckenzie, 2003, 2005a, 2005b). Such phenomenon attracts many academic studies. Urban economists gave the CID development as the example to demonstrate that market is not failure, instead it can efficiently deliver certain classes of public services and facilities because these CID communities provide many goods and services traditionally supplied by local government, including garbage collection, street cleaning, and police patrols. The provision of public goods and services is paid for by the collection of service charges. These communities also use by-laws to regulate land use and residents' behavior and settle disputes. As a result, their governance is often called 'private government' (Pack, 1992) and can be seen as a kind of market response to government or planning failure (Foldvary, 1994; Webster, 2001).

Deng (2002, 2003a) using transaction costs theory to support the CID development, he points out the traditional land use pattern, which has the typical *hold-up* problem. The hold-up problem is due to the transaction of asset specificity in which those investments of such assets generates considerable sunk costs, owners incur a very high risk of being exploited by opportunistic behaviour after investment. Fear of this risk of opportunism leads to non-investment or under-investment is conceptualized as the hold –up problem. Cities of the 20th century was the one whereby government owns the collective goods and provides the public services. Homeowners own the private goods and have only one provider of public services, which is just the typical condition of special asset investment. Homeowners have high sunk costs and high moving cost after buying a house. Moreover, since there is only one provider, the government, the value of homeowners' properties will heavily depend on the government's provision of collective goods. Therefore, homeowners are in principle vulnerable to exploitation

by local governments or vulnerable simply to the lottery of redistributive policies. 'Regulator taking' behaviour and NIMBY (not in my back yard) are as examples of the hold-up problem. Deng continually (2003b) shows the ownership integration, in theory, resolves the problem of homeowners' special asset investment. If homeowners have a share, in principle they will not engage in rent seeking from in the legal entity and the hold-up problem can be controlled. On the other hand, under integrated ownership, collective goods providers have an incentive to continually refine their goods, because they reap the benefits from the increasing rents and land price.

So, from the theories and real growth of CID communities, it clearly implies that HOAs, the Commonhold-basis urban private governance, has better institutional efficiency than traditional municipal governments in providing collective goods, service and regulations. HOAs is a kind of market-oriented neighbourhood governance, which has the advantages such as the market competition through residents' voting within their feet, residents voluntarily choose the governance they want, and the HOA are composed from residents which will use they collective fund more efficiently and spending will easier to be monitored by residents (Foldvary, 2005). Britain also took part of this trend in releasing the Commonhold and Leasehold Reform Act in 2002 and the Act will encourage developers to further devolution and localization in government by translating condominium principles into new or old suburban housing development (Webster and Le Goix, 2005).

However, some scholars may not view a HOA is a market-oriented neighbourhood governance instead they emphasize the political aspects existing within the current operations of HOAs, which may make them not as highly efficient as their proponents have anticipated. Problems within HOA governance very often be reported are such board members lack of necessary expertise and enough incentives to operate communal affairs, and therefore inflexible enforcement of rules which not only damages the communal spirit and their properties but also waste the public court's resources (McKenzie, 1994). These references aware us that the institutional cost of HOA may be not as cheap as we originally thought and may more expensive than the traditional government dominated governance.

To strengthen the debate, there is a need to provide a comparison between HOA and traditional urban governance, which can justify whether CID should go further or not as McKenzie described "If we the reform of neighbourhood management by using HOA to replace the traditional role of government, it is necessary to have a study of comparing HOA and traditional municipal government to find out which one has a better institutional efficiency in terms of the cost in providing collective goods and service" (McKenzie, 2005). Another important implications of CID development that have been largely ignored is that the application of HOAs in neighborhood management not only suitable be adopted in suburban new residential development but also other land use and inner cities such as Nelson (1999) that he suggested there is no reason why the CID development model using HOAs cannot be transplanted to existing neighbourhoods to improve degraded or inadequate public services and facilities. Similar urban private governance as CID in residential area also can be observed called business improved district (BID) which pioneered in New York, is that government entitles organisations to levy an additional assessment within a specified area, used exclusively for improving the local environment and providing a defined range of services or works (Houston, 1997). There is a huge potential yet to explore in applying commonhold based institution in other land use.

Based on above reasons, the paper aims observe the applicability of HOA governance applying in the industrial parks and compare the institutional efficiency and evolving trend between HOA governed industrial parks and government dominated counterparts based on the Taiwan's case study data.

2. Co-evolution of Government and market in provision of industrial land

In Taiwan, the two most important systems of providing industrial districts are the traditional land-use planning system and the government-developed Industrial park (GDIP) system. These two delivery systems provide and manage over ninety per cent of industrial districts in Taiwan, about 63,341.4 hectares (Cheung, 2002). The reasons for founding the GDIP system were the time-consumption and high costs involved in changing zoning designation through the traditional planning system, which could not keep pace with market demand and was therefore hampering economic development. Between 1960 and 1970 industrial land supply lagged behind demand in a period when the Taiwanese economy was experiencing rapid growth. To stimulate further economic growth by providing sufficient industrial land and to resolve the ensuing environmental problems from piecemeal industrial district developments, the Industrial Development Bureau (IDB) was established in 1970. Accompanying the IDB's establishment, an exclusive industrial land use planning system was formed - called the government-developed Industrial park (GDIP). The publicly stated justification for GDIPs was to '*dynamically*' provide industrial land in Taiwan in contrast to the '*static*' provision through the urban and regional planning system (IDB, 2001). The managing system in GDIP is as the traditional municipal government that IDB owns the public facilities and subdivided lands, and then sold to private manufacturers. Public facilities and common affairs are all managed by IDB's subordinate – service centre.

However, the institutional evolution of the GDIP system since 1970 has inevitably suffered from the same problems that beset the traditional land-use planning system, which once again confirmed the public choice economists' claim that government has inherent tendency to evolving towards less efficiency and over its optimal size. Speed of delivery is one major problem and inflexibility of regulations is another. It takes almost two years to fulfill all the necessary processes before starting to construct factories (IDB, 1996). One result of the inflexibility of the GDIP system is that many industrial uses inconsistent with the zoning ordinances can be found in urban suburbs, especially concentrations of small-medium enterprises (SMEs). These SMEs can neither afford the cost of going through the traditional land use planning system to legitimate their industrial land use nor have an interest in moving into a GDIP. Hi-tech SMEs with advanced technology and need for small amounts of space, and with limited capital to spend on land, have led to increasing amounts of illegal industrial land uses. Consequently, the government's dysfunctioning industrial land supply strategy has led to widespread environmental problems as a result of traffic and waste pollutions in the immediate surroundings. Meanwhile, there are many unsold industrial sites in GDIPs that waste government resources. Between 1975 and 1980 GDIPs had many unsold industrial sites. This did not mean, however, that supply outpaced market demand but showed that government provision of industrial lands was failing to gauge market needs and demand. For example, at the end of August 2002, unsold industrial sites in GDIPs amounted to 715.8 hectares of the total industrial land in Taiwan (Cheung, 2002). By comparison, at the end of 2002, there were 5918 illegal industrial uses, of which around 2,100 cases were in urban areas (*United News*, 2002). It is in this context that the market innovation of factory-office building (FOB) emerged to match SMEs' demands.

FOB, is a high-rise building similar to residential condominiums, but tailored for SMEs, which needs less space and close proximity to cities in contrast to traditional manufacturers. The FOB's public facilities are specifically designed for manufacturing use and include spaces for lorries to load / unload goods; water pipes designed for the production process; ventilation systems to expel fumes, and so on. Owners share the cost of construction, public facilities, and use of the planning system. The first FOB was constructed in 1978 by the Far East Estate Company. Its founder, Mr. Zhao, describes how it originated as a result of market response to government failure.

“When I saw the newspaper report in 1976 that there were about twenty thousand illegal factories outside the industrial zones, which were seriously

affecting the communal environmental qualities and giving rise to safety concerns, this led me to think how this problem could be resolved. ...I soon realised that in Taiwan, because of a dense population and scarce land resources, SMEs cannot afford the cost of buying land and constructing their factories. So, I invented the factory-office building to resolve their problems.” (Liu, 2003).

Since that time, the Far East Company has constructed more than one hundred such projects, providing jobs for more than seventy thousand employees. The company created a trend for developing FOBs that many other estate companies have followed. To-date, the Far East Company still leads the field. Chen (1999) surveyed the development of FOB development in Taiwan based on the Far East Company’s projects, and revealed that during the 1970s, first generation FOBs were three to seven storey traditional industrial buildings emphasising industrial usage and associated facilities. Their clients were mostly traditional industrial SMEs. Evolving with economic and technological change, the latest FOBs have become high-rise, hi-tech building complexes, providing intelligent buildings and sophisticated environments through greater amounts of open space, landscaped features, and other facilities. Developers of FOBs not only focus on new hi-tech SMEs but also design appropriate locations for associated industries to cluster together in their FOB complexes, as shown in Figure 1. This shows the market’s ability to do what government planners have long sought to do: facilitate beneficial industrial clustering and produce localised agglomeration economies and economies of scale. Thus, the CIDs in industrial districts in Taiwan are due to government’s inadequate provision of industrial land, which fails to meet the demands of industrial companies.

Figure 1. FOBs in Taipei City suburbs



FOBs, as developer-led CIDs, are also required to create their HOAs, in accordance with the stipulations of the CML (Condominium Management Law) implemented in 1995 in Taiwan. Although the CML was tailored for residential condominiums and did not consider the situation of FOBs in industrial neighbourhood, its prescription does not exclusively define its applicabilities to residential condominiums but to any building whose facilities or land are commonly owned by two people or more. Therefore, the ownership structure within FOBs, like residential condominiums, requires the creation of a HOA according to the CML (Lin, 2001). In industrial districts where there exist FOBs (with common-ownership structure) and traditional factory building (with single ownership structure), only FOBs need to create HOAs and obey the CML. In GDIPs, both types of building are all managed by IDB’s service centres. However, there is an interesting case, the NangKang software park, where it is made up entirely of FOBs and becomes the largest FOB complex in Taiwan. Moreover, NKSP was developed through GDIPs system and become a first commonhold basis industrial park in Taiwan and based on CML, IDB was forced to hand over the authority from its service centre to NKSP’s HOA. This renders a good laboratory to observe how such private governance works and evolves, and whether NangKang SoftwarePark’s governance is more efficiency than other GDIP’s service centers.

3. The physical and institutional environment of the case study - NangKang Software Park

The NKSP plan involved two phases. The first phase, which included a five-office building complex totalling approximately 39,614.7m², was completed in 1999. Phase two, which included a three-office building complex, commenced in 1999 and was completed at the end of 2003(see figure 2). Cutting edge technologies have been employed in the creation of NKSP's physical environment and the environmental design has sought to integrate people and nature with science and technology. For example, the automatic control system monitors the electricity, air-conditioning, telecommunications, security, and thousands of other control points in the park, ensuring efficiency and security of utility supply. To provide an environment that attracts research and development, NKSP includes facilities, such as banks, post offices, restaurants, an exhibition hall, and multi-purpose conference rooms (Century Development Corporation, 2003). This paper's analysis focused on phase 1, because in phase two, only a few units are sold, most units still owned by IDB and IDB decided to lease these units. Therefore, in phase two, IDB holds the authority through the service centre.

Figure 2: NKSP: the left picture shows the entrance; the right picture shows the external appearance



NKSP is managed by the HOAs which represents the owners of these common-owned public facilities and is also the provider of regulations. The HOA of NKSP was established in January 2001 and created its own constitution. Now, the HOA is responsible for maintaining public facilities and common affairs on behalf of companies and their working staff in NKSP. Its annual income is close to 2.5 million US dollars. The routine operations of the HOA are decided by elected board members. Based on the constitution, 11 board members have to be elected. However, because NKSP is a complex of FOBs, board members are not actually the property owners themselves, but employees appointed by company owners to represent them in the HOA. This is a principal-agent pattern, i.e. the agent is appointed by the principal to act on his/her behalf and to deal with his/her affairs based on his/her interests, which is a major difference from residential communities or condominiums where the HOA's board members are the homeowners themselves.

The problem of moral hazard may arise from this principle-agent structure. However, this seems not to be serious and can be constrained as a HOA staff member indicated:

“In NKSP, those board members appointed by property owners are chosen from among high-ranking senior managers in property owners’ companies. They have a good standing in their companies and can be trusted.”

This can be interpreted as an owner strategy to reduce the risk of agent's moral hazard. Senior employees have more understanding of their companies, have more personal commitment and personal interests at stake and can be expected to responsibly represent their companies' interests. Moral hazard within sharing-owner companies is reduced by resorting to informal institutions – trust and loyalty – rather than contract. It, therefore, appears that the extra layer of decision making does not give rise to significant moral hazard problems or additional transaction costs to owners. On the other hand, the reason for this may lie partly in the nature of the decisions made by the HOA's board, which are not generally of major significance to a company's performance and do not concern resources that the company's agents can easily capture for personal benefit. Moreover, once senior employees' rent seeking behaviors are found out, the cost to them could be very high in terms of their career and reputation. This weakens their incentives to behave in this manner.

One common problem in HOA governance, the lacking of professionalism in board members (Kennedy, 1995; Major, 1992; MacCallum, 2003) can be found in NKSP. However, this problem is eased by the external assistance through property management company. NKSP contracted with Jack Property Service & Management Company (JPSMC) to manage this environment, including maintenance of NKSP's environment, provision of services to companies and employees, the maintenance and operation of the general control system, maintenance of public facilities, such as lifts and generators, public spaces such as parking lots and parks, and security. The pattern of collaboration between NKSP's HOA and JPSMC will be further elaborated in next section.

4. The evolution of private governance

4.1 The evolution of private regulation

The economic theory of transaction costs is based on the assumption that human rationality is bounded and all contracts are assumed to be incomplete (Williamson, 1975 and 1985). As a consequence, transactional parties will try to design more appropriate contents into contracts in order to reduce *ex post facto* transaction costs. Barzel (1997) noted that to delineate every attribute of property rights is prohibitively costly and some property rights are therefore inevitably left in the public domain. Regulation is needed to constrain competitive behaviour. When the value of rights in the public domain increases and the cost of delineating these rights is smaller than the conflict cost arising from unconstrained competition (gains derived from them), regulations will emerge to delineate rights.

NKSP's constitution was established in June 2000, and has proved to be an incomplete contract for governing all dimensions of life within the condominium. Regulations which have emerged to complement the constitution are mostly due to the HOA's and JPSMC's attempts to prevent likely foreseeable rent-seeking behaviours and to counteract the effects of unforeseen events and unpredictable demands it has so far failed to handle efficiently. As regards the former, JPSMC and HOA staff members have found through experience that new regulations are necessary to meet new circumstances and changing conditions. Thus, at the second homeowners' meeting in March 2001, many additional regulations were infused into the constitution, which provided a rough constitutional framework for the smooth running of NKSP (see Table 1). Other regulations issued after March, 2001 are mostly designed to address the effects of unforeseen events and conditions.

Although rules have emerged for different reasons, their design and refinement are similar. First, rules cannot be designed perfectly the first time. Experience highlights a rule's limitations and reveals how incompletely it fulfills intended objectives. Therefore, adjustments are made by trial and error. This seems to happen quite quickly: rule adjustments generally take only a few months to implement. This appears much quicker than government law.

The pattern of producing regulations in NKSP is as follows. First, JPSMC finds a problem

that no existing rule addresses and informs the HOA of this. The problem is then discussed with HOA staff in order to prepare a draft regulation. This draft will then be discussed with board members and presented at a homeowners' meeting. When the draft is approved at the meeting, the rule becomes law and is subject to enforcement. If practical problems emerge the rule may require further adjustment. Further adjustments will be discussed at a board members' meeting according to a report prepared by JPSMC, and then referred to the homeowners' meeting until regulations are refined to the satisfaction of all concerned and considered suitable for enforcement.

This dynamic pattern of producing regulations shows the evolution of private governance in NKSP. The incomplete contract leads to some rights in the public domain being delineated one by one through trial and error. These go hand in hand with changes in the environment. Private governance gradually evolves to become more sophisticated and robust. At the end of March 2007, there were 16 regulations in NKSP, evolving from the pattern as described above (see in table 1). The regulations can be categorized in three types. There were 4 regulations for the HOA's governance, 3 regulations for outside associate contractors, and 9 for governing companies', and employees' behaviours.

One type of regulations associated with HOA's governance which is mainly designed to constrain the opportunistic behaviors from the HOA staffs and also aims to delineate more clearly of board members' liabilities and authority which let them more easily to make decisions such as the regulations of 'Rules for Public Fund Usage', 'Rules for Petty Cash Usage' and 'Liabilities and Use of Public Fund Limitations for Board Members'. 'Working Principles for HOA Staff' regulates the recruitment of new HOA staff – ensuring an open and equal process to avoid inferior quality workers hired via personal connections. These principles also help to enhance HOA staff members' work performance and productivity.

Second type of regulations associated with outside contractors because opportunistic behaviours arise not only among people inside the HOA but also among outside associate contractors such as the 'Rules for Service Charge Usage' were designed to further regulate how JPSMC fulfills its tasks, for example, at the end of the year, JPSMC should report on actual spending and explain reasons for any differences between spending and the budget plan. Problems have also occurred with contractors, such as decorating contractors which is probably to produce noise and damage to buildings. As a consequence, the 'Decoration Regulation' was established to tackle such problems. Similar regulation also can be found in the 'Regulation for TV or Internet Cable Practitioners' which was introduced to manage these TV and cable companies to avoid their installment in affecting public safety and building's outside appearance.

Third type of regulations is designed to manage the behaviors of companies and their employees because insiders' competitive behaviours will impose externality costs and therefore needs to restrict the use of collective facilities. For example, the 'Company Sign Regulation' is designed to constrain companies to set up signs in specific positions and locations only and 'Rules for Public Space Usage' regulates peoples' behaviour and discourages them from engaging in activities that could produce too much noise, pollution, and affect public amenities and safety. The 'Parking Lot Management' assigns a specified number of parking lots to identified users to avoid competitive behaviour.

So, it can be anticipated that the number of regulations in NKSP will continue to increase. The evolution of private regulations in NKSP can be seen as a discovering process of trial and error to delineate and re-delineate rights in the public domain, so that the transaction costs of competing behaviours for capturing property rights in the public domain are reduced.

Table 1 List of regulations in NKSP as of March, 2006

<p>Regulations for the HOA, Companies, and employees</p>	<p>NKSP Constitution (Issued on 28/06/2000) (First adjustment on 19/03/2001) (Second adjustment on 17/10/2001)</p>
---	--

Regulations for the HOA's Governance	Rules for Petty Cash Usage (Issued on 19/3/2001) Rules for Public Fund Usage (Issued on 6/7/2001) Working Principles for HOA Staff (Issued on 6/7/2001) Liabilities and Public Fund Usage Limitations for Board Members (Issued on 3/1/2003)
Regulations for outside associate contractors	Rules for Service Charge Usage (Issued on 19/3/2001) Decoration Construction Regulation (Issued on 19/3/2001) Regulation for TV or Internet cable practitioners (Issued on 6/7/2001, first adjustment on 5/12/2001)
Regulations for companies and employees	Parking Lot Management (Issued on 19/3/2001) Company Sign Regulation (Issued on 19/3/2001, First adjustment on 2/5/2001) Waste Disposal Regulation (Issued on 19/3/2001) Energy Usage Principle (First adjustment on 19/3/2001) Rules For Using the Generator Room (Issued on 19/3/2001, First adjustment on 2/5/2001) Rules for Public Space Usage (Issued on 19/3/2001) Management of Public Space (Issued on 19/3/2001) Company Moving In and Out Regulations (Issued on 8/2001) Smoking Ban in Public Spaces (Issued on 31/3/2003)

Source: Compiled from the HOA's minutes

4.2 The efficiency of the delineation of property rights

The PMC clearly has the local knowledge to be able to run the HOA successfully. The evolution of regulations in NKSP indicates that the HOA has sufficient flexibility to successively remove more rights from the public domain to keep pace with changes in the environment and the value of property rights. It does this with assistance from JPSC, which it contractually constrains to deliver progressively more efficient management.

If we examine regulations pertaining to GDIPs (Table 2), it is clear they are rough and general. The 'Encouraging Industrial Integration Ordinance' and the 'Detailed Prescription for Encouraging Industrial Integration Ordinance', describe how to develop and manage GDIPs, including the process and financial responsibilities of government and companies, respectively. These two laws are at the top of the hierarchical regulatory system governing GDIPs' development and management. Other regulations derived from these are the Industrial Park Management Bureau Code and Working Principles for the Management Bureau of Industrial Parks, which designate the apparatus for institutionalising GDIPs and explain how to operate them. The Standard for Levying Service Charges in Industrial Parks describes the standards for levying a service charge on property owners, based on the area(s) occupied. The financial management of a service centre is based on the government's budgetary process under the 'Guidelines for Operating the Industrial Park Development and Management Fund'. Companies are required to pay a service charge for the maintenance of public facilities and public services provided by service centres. Usage of these is restrained by normal zoning regulations that are far less specific than those in NKSP, which results in more rights left in the public domain and

more competitive behaviour.

Table 4 List of regulations in GDIPs

<p>Regulations for service centres and Companies</p>	<p>Encouraging Industrial Integration Ordinance (Issued on 29/12/1990, adjusted on 27/1/1995, 27/1/1998, 21/1/1998, 31/12/1999, 30/1/2002)</p> <p>Detailed Prescription for Encouraging Industrial Integration Ordinance (Issued on 24/4/1991, adjusted on 27/10/1993, 15/11/1995, 22/1/1997, 24/9/1997, 9/12/1998, 21/7/1999, 29/12/2000, 12/6/2002)</p>
<p>Regulations for service centres</p>	<p>Industrial Park Management Bureau Code (Issued on 11/11/1972, adjusted on 17/2/1983, 14/7/1986, 24/03/1988, 30/6/1999)</p> <p>Standard for Levying Service Charges in Industrial Parks (Issued on 24/7/1991, adjusted on 14/12/1994, 29/1/1997, 14/1/1998, 29/7/1998)</p> <p>Working Principles for the Management Bureau of Industrial Parks (Issued on 25/07/2002)</p> <p>Guidelines for Operating the Industrial Park's Development and Management Fund (Issued on 07/10/1991, adjusted on 7/9/1998, 22/12/2000, 24/09/2002)</p>
<p>Regulations for companies</p>	<p>Standard for Levying Service Charges in Industrial Parks (Issued on 24/7/1991, adjusted on 14/12/1994, 29/1/1997, 14/1/1998, 29/7/1998)</p>

Source: Regulations in Industrial Park Development and management (IDB, 2002)

4.3 Cost Efficiency

The service charge imposed by JPSMC gradually declined, from \$ 229,090 per month at the beginning of 2001, to \$ 194,526 in April 2002 and, finally, to \$ 189,291 in 2003. Table 5 shows the cost structure of the service charge in 2002 for managing collective goods in NKSP. Over a third of expenditure was for the maintenance of public facilities, with the cost of hiring staff for security purposes, cleaning, and overseeing parking lots making up, 36% and 34%, respectively. The NKSP had 20 security guards in 2002. Twenty-three per cent of expenditure was spent on hiring staff to maintain the equipment and engineers to operate and maintain the general control system. Only 7% of total expenditure went on administrative staff.

Thus, most costs were incurred for public services' maintenance and security, with comparatively little spent on organisational costs (NKSP's HOA 2000-2002). In fact, the reduction in service charges of approx \$ 34,200/month was achieved mostly through a reduction in human resources cost. Human resources cost was reduced under the threat of competition, while maintenance cost decreased from \$ 151,724 to \$ 122,350/month. The reduction in service charges did not apparently have a negative impact on public maintenance quality, implying that efficiency was increased.

Table 5 Expenditure in NKSP in 2002

Items	Money(US dollars)	Percentage
Administrative staff	\$ 184583	7%
Staff to maintain equipment and engineers to operate and maintain the general control system	\$ 551783	23%
Staff for security purposes, cleaning, and overseeing parking lots	\$ 819965	34%
Public Maintenance	\$ 881689	36%
Total	\$ 2438020	100%

Source: NKSP's HOA, 2002

Table 6 shows the cost structure for running and maintaining GDIPs in Taiwan in 2002. GDIPs are divided into three geographic categories: northern, central, and southern. The costs are classified according to the human cost, organisational cost, and expenditure on public maintenance. The highest expenditure was the human cost which contributed to over half of total costs in northern and southern GDIPs. The second highest was organisational cost, the expenditure required to maintain service centres, including service centre buildings, properties, and annual installments to pay for the cost of equipment. This cost was very high in central GDIPs, occupying half of their annual budget (50%). The cost was lower in northern and southern GDIPs, 10% and 31%, respectively. The cost for providing collective goods was the smallest part of the annual expenditure, highest in northern GDIPs (36%), and 17% in both central and southern GDIPs.

Table 6: The cost structure for running and maintaining northern, central, and southern GDIPs in Taiwan in 2002

	Human Cost	Organisational Cost	Public Services' Maintenance	Total Expenditure
Northern GDIPs	\$ 5319061 (54%)	\$ 1016622 (10%)	\$ 3605303 (36%)	\$ 9940986 (100%)
Central GDIPs	\$ 4800247 (33%)	\$ 7238876 (50%)	\$ 2494157 (17%)	\$ 14533280 (100%)
Southern GDIPs	\$ 7225513 (52%)	\$ 4232716 (31%)	\$ 2378547 (17%)	\$ 13836776 (100%)

Total	\$ 17344822	\$ 12488215	\$ 8478007	\$ 38311044
	(46%)	(31%)	(23%)	(100%)

Source: Industrial Park Development and Management Fund Committee, 2002

It can be seen from Table 6 that GDIPs' annual budget is mainly spent on the human cost, operating and running the administrative system, and the organisational cost incurred in maintaining the service centre. In contrast, with the exception of Northern GDIPs, public services' maintenance expenditure is very low. Further, the human cost is mostly for administrative staff and not, as in NKSP, for hiring security guards to ensure safety and strengthen the ability to enforce rules and detect their violations. Moreover, GDIPs do not derive any income from maintaining collective goods unlike NKSP's HOA.

5. Conclusion

The examination of NKSP's governance, we can find that the industrial neighbourhood management by HOAs has the feature of principal-agent relations. Under this relationship, owners have low incentives and practical limits to participating in HOAs. Their agents have neither strong incentives to participate nor to engage in rent-seeking behaviour, due possibly to the mission of managing communal affairs being of secondary importance and the lack of material or immaterial inducements. Although NKSP's private governance suffers from these problems, the comparison between NKSP's HOA and other GDIPs' service centres suggests the former has lower institutional costs and can delineate property rights more efficiently than government-led GDIPs. Therefore, Taiwan's government should attempt to transform current government-dominated GDIP's managing system to more market-oriented system as HOA implemented in NKSP. Similar suggestion has been address as Nelson (1999, 2002), proposing five steps to privatize existing neighborhoods by creating HOAs to replace the role of municipal government (earlier proposals see Liebmann, 1993). He believes that there is no reason why a co-ownership model cannot be transplanted to existing neighborhoods. There is no reason either why the HOA model in NKSP cannot be implanted in other GDIPs.

To advertise the HOA model to existing GDIPs, we have to admit that its greater efficiency can be mostly attributed to another entrepreneur, the property management company. The threat of competition from a growing PMC market into industrial neighbourhoods seems to have reduced the risk of pricing above costs. From this perspective, the roles of government to improve the efficiency of HOA governance are to foster the professionalization of the PMC and to encourage a competitive PMC industry. Institutions need to be in place to protect HOA from poorly performing PMC and for good practices to be able to spread easily from one to the other. When more and more PMCs to explore the market of FOBs' management, competition will speed up PMCs' trial and error processes to innovate new regulations and better ways to deliver better service in cheaper price. Industrial district management will always remain the power of innovation and spirit of entrepreneurship.

Reference

- Barzel, Y., (1997). *Economic Analysis of Property rights*, Cambridge: Cambridge University Press.
- Campell, S. and Fainstein, S.S., (1996). Introduction: the structure and debates of planning theory, in Campell, S. and Fainstein, S.S., (eds.), *Reading in Planning Theory*, Massachusetts: Blackwell, 1-14.
- Chen, M.W. (1999), *Evolving Changes of Land Uses and Industrial Development in Urban Industrial Zone: Industrial Estate in Taipei Metropolitan Area*, Unpublished Msc dissertation, National Taiwan University, Taiwan.
- Century Development Corporation (2003), *Global , Innovation , Collaboration*, Century Development Corporation, Taipei.
- Cheung, F. (2002), *A Study of Probabilities in Integrating All Types of Industrial Districts in Taiwan*, National Policy Foundation Research Report, NPF, Taipei.
- Deng, F.F., (2002). "Ground lease-based land use system versus common interest development", *Land Economics*, Vol.78, No. 2, 190-206
- Deng, F.F., (2003a). "The rebound of private zoning: property rights and local governance in urban land use", *Environment and Planning A*, Vol., 133-149.
- Deng, F.F., (2003b). "Collective goods and the political hold-up problem", *Journal of Institutional and Theoretical Economics*, Vol.159, 414-434.
- Foldvary, F. (1994), *Public Goods and Private Communities*, London, Edward Elgar.
- Foldvary, F. (2005) "Planning by freehold", *Economic Affairs*, Vol25, No. 4, 11-15.
- Houston, L.O. (1997), *"Business Improvement District"*, Urban Land Institute: Washington, DC
- IDB (1996), *Strategies of Intelligent Industrial Park Development*, IDB, Taipei.
- IDB (2001), *Sustainable Mechanism in Industrial Parks*, IDB, Taipei.
- IDB (2002a), *The Survey of Industrial Services centers' Performance and Training Program of Staff in Service Centers*, IDB, Taipei.
- IDB, (2002b), *Regulations in Industrial Park Development and management*, IDB, Taipei.
- Industrial Park Development and Management Fund Committee, (2002), *Cost structure of Service Centers in 2002*, Taipei.
- Kennedy, D.J., (1995). "Residential associations as state actors: Regulating the impact of gated communities on nonmembers", *The Yale Law Journal*, Vol. 105, 761-793.
- Liebmann, G. W., (1993). "Devolution of power to community and block associations", *The Urban Lawyer*, Vol. 25 No. 2, 335-383.
- Liu, Y. F. (2003), "Expert on Factory-Office Building- Zhao Teng-Hsiung", *United News*, 19/12/03.
- Lin, C.Y. (2001), *Voluntary Environmental Management Part II- a case study in Wu-Ku Industry Park*, Taipei: Council of National Science.
- MacCallum, S.H., (2003). "The enterprise of community: Market competition, land and environment", *Journal of Libertarian Studies*, Vol.17, No.4, 1-15.
- Major, A., (1992). "Problems of condominium governance", *Real Estate Review*, Vol.21, No.4, 70-75.
- McKenzie, E., (1994). *Privatopia*, Yale University Press, New Haven and London.
- McKenzie, E., (2003). "Common-Interest housing in the communities of tomorrow", *Housing Policy Debate*, Vol. 14, No.1&2, 203-234.
- McKenzie, E., (2005a), "Planning through Residential Clubs: homeowners' associations", *Economic Affairs*, Vol25, No.4, 24-27
- McKenzie, E., (2005b)The dynamics of Privatopia: private residential governance in the USA, in Glasze G., Webster C., Frantz K., (eds), *Private Cites*, New York, Routledge
- Nelson, R.H., (1999). "Privatizing the neighbourhood: a proposal to replace zoning with private collective property rights to existing neighbourhoods", *George Mason Law Review*, Vol.7, No.4, 827-880
- North, D., (1990). *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge
- Olson M., (1982). *The Rise and Decline of Nations*, Yale University Press, New Haven
- Olson M., (2000). *Power and Prosperity*, Basic Book, New York
- Pennington, M., (2000). *Planning and the Political Market*, The Athlone Press, London
- Williamson, O.E., (1975). *Markets and Hierarchies*, Free Press, New York
- Williamson, O.E., (1985). *The Economic Institutions of Capitalism*, Free Press, New York:
- Webster, C. J. (2001), "Gated Cities of Tomorrow", *Town Planning Review*, Vol.72 No.2, 149-170
- Webster and Le Goix, 2005 "Planning by Commonhold", *Economic Affairs*, Vol25, 4, 19-23
- United News (2002), "By no means of justification to illegal manufacturers in Agriculture districts", 04/26/02.