

## ABSTRACT

Title of Dissertation: REJUVENATING THE DEVELOPMENTAL STATE IN  
TAIWAN: THE IMPACTS OF THE EIA AS AN  
ENVIRONMENTAL GOVERNANCE (2006-2011)

Ying-Feng Chen, Doctor of Philosophy, 2011

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Asian Tigers were sometimes referred to “developmental states” for they were capable of designing successful development agendas and implementing these plans with the compliance of private capital instead of simply regulating the market. However, with the fast democratic transition during the 1990s, the developmental state encountered serious challenges from business sectors, opposition parties and civil groups. Some literature suggested that this infiltration of private sector jeopardized the state’s autonomy in formulating long-term plans. The chaotic policy process at the early stage of democratic transition revealed Taiwan state’s capability in controlling developmental agendas has been weakened. *If the developmental state of Taiwan ceased to function, in what way did it evolve?*

This dissertation aimed to answer this question by examining the role of the Taiwan state in promoting three major investments, the Formosa Steel-making Plant, the Central Taiwan Science Park in Holi-Chixing and Erlin, and the Eighth Petrochemical Plant, from 2006 to 2010. While developmental states were often

argued incompatible with democratic regimes, this dissertation demonstrated that the status of Taiwan's developmental state remained firm after democratic transition given that the state was still autonomous in terms of defining and preserving national interests.

Furthermore, it WAS the public participation and environmental institutional monitoring brought by democratic transition that reinforced the developmental state in Taiwan by correcting the state's errors in promoting those inefficient projects. Through the interdependent governance in the review mechanisms, these industrial programs based on outdated development agendas were smoothly postponed. Some programs were even called off by the corporations themselves. *The democratic transition did not lessen politicians' pursuit of constant national economic development; moreover, it brought in correcting mechanisms and thus further reinforced the capacity of the developmental state in choosing developmental agendas.*

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(2006-2011)

by

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## **Dedication**

The author would like to dedicate his dissertation to Chy-yun Liu, the lovely and supportive wife of the author at all times, to thank her for her whole-hearted company with the author.

The author would also like to thank his parents ( Dong-chiang Chen, Tsai-ling Yang, Sheng-li Liu, and Huan-chu Wu) for their devotions, for the family has been the greatest motivation to push this dissertation forward.

At last, as a father of two, the author would like to dedicate his heart to Megan and Marcus, for they completed this dissertation in a way that they had never imagined.

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## **List of Abbreviations**

- APC (Area Planning Committee)
- ASEAN (Association of Southeast Asian Nations)
- CEPD (Council for Economy Planning and Development)
- CMAI(Chemical Market Associates Inc.)
- CP (China Petroleum)
- CPA (Construction and Planning Agency)
- CS (the China Steel Company)
- CTRP (Central Taiwan Regional Plan)
- CTSP (Central Taiwan Science Park)
- DPP (Democratic Progressive Party)
- ECFA (Economic Cooperation Framework Agreement)
- EIA (Environmental Impact Assessment)
- ENP (the Eighth Naphtha-cracking Plant)
- EPA (Environmental Protection Agency)
- FNP (the Fifth Naphtha-cracking Plant)
- GGRA (Reduction of the Greenhouse Gas Act)
- GP (Guoguang Petrochemical Company)
- IDB (Industrial Development Bureau)

IEA (International Energy Agency)

IEK (Industrial Economics and Knowledge)

IRC (Investment Review Committee)

MOEA (Ministry of Economic Affairs)

MOEA (Ministry of Economy Affairs)

MOT (Ministry of Treasury)

PERSI (Policy EIA Report on Steel Industry)

RPA (Regional Planning Act)

SDC (Sustainable Developmental Council)

SNP (the sixth Naphtha-cracking plant)

SOE (State-Owned Enterprise)

TNP (the Third Naphtha-cracking Plant)

TS (Taiwan Sugar Company)

TSIIA (Taiwan Steel and Iron Industries Association)

TTTS (Two Trillions, Twin Stars)

WSA (World Steel Association)

ZIWA (Zhanghua Irrigation Water Association)

## **Chapter 1 Survival of the Developmental State?**

### **An Overview**

In 1990s, scholars have been amazed by the successful economic growth of East Asian Countries. These Asian Tigers, instead of simply regulating the market mechanisms, exerted dominance over the economy. They were called “developmental states” for they were capable of designing successful development agendas and implementing these plans with the compliance of private capital. In other words, the state was not only autonomous but also capable of guiding industrial sectors to catch up with developed countries.

Among those states such as Japan, Korea and Singapore, Taiwan has been considered an anomaly. Unlike the close partnership between the state decision-makers and corporations in Japan and Korea, a far more remote relationship between the authoritarian KMT regime and business sectors has been observed, and it seemed to have contributed to Taiwan’s economic success. As a group of strong economic bureaucracy in Taiwan has been accredited for their deliberate decision-making in shaping state’s economic schemes, the strong autonomy of the state brought by the authoritarian rule seemed to have guaranteed the compliance of private sectors with state’s industrial policies. Haggard has thus believed that

authoritarian rule may be the key in the model of Taiwan the developmental state.<sup>1</sup>

However, with the fast democratic transition during the 1990s, the developmental state encountered serious challenges from business sectors, opposition parties and civil groups. The participation of these groups into political decisions tend to result in a “lame duck state” since the state could no longer monopolize the decision-making agendas. While business groups started to play a more important role during democratic transition, their demands on various economic privileges have accelerated. This combination can jeopardize the state’s autonomy in formulating long-term plans. In addition, while the political-business relationship has come closer during democratic transition, the massive participation of civil sectors and oppositional political parties may also break the state’s monopoly in decision-making processes. In other words, the weakening of the authoritarian regime may lead to the collapse of the developmental state of Taiwan.

When the authoritarian regime stepped down in 2000 through the party turnover, the Democratic Progressive Party (DPP) rebuilt its own policy network. The massive participation of new stakeholders into a much opener policy-making mechanism seemed to have further posed a change on features of the developmental state. The state could no longer ignore external costs of previous economic plans.

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<sup>1</sup> Haggard, Stephan. (2004). “On Governing the Market”, *Issues & Studies* Vol40, no. 1 (March 2004): 14-45. pp15

Environmental pollutions accompanied with old developing projects as well as cost-effectiveness calculations of new ones started to be open to the public through the EIA (Environmental Impact Assessment) reviews after the democratic transition. From 2005 to 2010, these plans faced stringent challenges in the EIA reviews held by the EPA (Environmental Protection Agency). The state endeavored great efforts to facilitate the development projects passing the EIA reviews, and some of the measures ruled by the court were even illegal. The state declared that those plans were key to constant economic growth of Taiwan and that it was the state's obligation to support these plans, for they would construct good foundations for rapid industrial development or upgrading. However, the state's arbitrary actions have aroused fierce resistance from civil groups.

These state of Taiwan intended to “remain businesses as usual” after the democratic transition. However, with diverse opinions in the policy-making process, **how did the developmental state stayed operational in front of public reviews? If the developmental state of Taiwan ceased to function, in what way did it evolve?**

This dissertation aims to answer both questions by examining the role of the Taiwan state in promoting three major investments from 2006 to 2010. In these three cases, the state was trying to galvanize grand-scale developing projects in three different industrial sectors (steel, LCD and petrochemical) as the state claimed that

three projects would help Taiwan achieve long-term economic benefits. A careful review on the behaviors of the Taiwan state and the features of these economic projects may help to explain whether the developmental state survive the challenge of democratic transition.

### **Developmental State Theory and Taiwan's Experience**

Since Skocpol, political scientists have begun to emphasize the salience of “state”. States were no longer treated as neutral and mindless.<sup>2</sup> Particularly, some scholars have been interested in the developmental role of states in the East Asia. The rapid economic success occurred in 1980s in East Asian countries such as Japan, Korea, Taiwan and Singapore had drawn scholars' attention, for the states in these countries appeared to be dominant and active in guiding national development issues. These countries have been considered paradigms of “Developmental States” for their effective policy formulation and administration. This notion particularly describes a group of state officials that are capable of guiding state development and embracing the economic success.<sup>3</sup>

With the economical boom of East Asian countries, the “Developmental State Theory” drawn from those economic miracles became popular during the 1980s and

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<sup>2</sup> Theda Skocpol, (1985) *Bring the State Back in*, Cambridge: Cambridge University Press, 1985

<sup>3</sup> Kohil, Atul, *State-Directed Development: Political Power and Industrialization in the Global Periphery*, Cambridge, 2004.



1990s.<sup>4</sup> While these countries have already fallen behind of developed countries in the beginning, they concentrated their limited resources on strategic industrial sectors. To do that, the developmental states wisely selected their developing strategies and nurtured certain industrial sectors to compete with their competitors in other developed countries.<sup>5</sup> The developmental states exploited their capacity and efficiency to reach success in the world market. During the process, instead of being passively responding to the demands of business interests, the state played an essential agent in leading the country to prosperity via selective industrial policies.

How did the developmental states shape their industrial policies? There were different approaches. Johnson believed that the principle of developmental states was “market-conforming,” which was directing private capital to compete in the global market with other countries.<sup>6</sup> Amsden particularly emphasized the “market augmentation” strategy, which means the states exploited tax policies to assist certain industrial sector to expand their territories. Through this “subsidy,” the states are able to nurture strategic sectors.<sup>7</sup> Aoki further argued that while unconditional subsidies would encourage the rent-seeking behaviors of business groups, a “contingent rent”

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<sup>4</sup> See Amsden, A. (1985) “The state and Taiwan's economic development,” in P. Evans, et.al.(eds.) *Bringing the State Back In*. Cambridge: Cambridge University Press.

Onis, z. (1991), “The Logic of the Developmental State,” *Comparative Politics*, Oct. 109-126.

Johnson, C. (1982) *MITI and the Japanese Miracles: The Growth of Industrial Policy, 1925-1975*. Palo Alto, CA: Stanford University Press.

<sup>5</sup> Johnson A. Chalmer, (1987) “Political Institutions and Political Performance,” In Frederick Deyo edited, *The Political Economy of New Asian Industrialism*, (Ithaca: Cornell University Press, 1987)

<sup>6</sup> Johnson, C. (1982), *Ibid*.

<sup>7</sup> Amsden, A. (1990) *Asia's Next Giant*. NY: Oxford University Press.

would be required while incentives were needed for these sectors to enhance their competitiveness. A “market enhancing” strategy would offer developmental states a punitive mechanism to laggard industrial sectors.<sup>8</sup>

Sometimes the states even had to create a market when the market did not exist. Wade suggested that certain kinds of sectors could be considered infrastructures given their long-term potentials and significance in the supply chain; therefore, the government needs to create and govern these markets.<sup>9</sup> Under the principle of “governed markets,” the states adopted favorable measures to introduce capital into these markets, while private capital may seem less interested in taking the first move.

Despite the difference of these strategies, the developmental state theorists agreed that the states were able to guide the private capital into strategic sectors and to exert punishment to ineffective corporations. According to Kuo, these states shared three characteristics in their developing patterns:<sup>10</sup>

- A. **Autonomy:** The states officials have to maintain a sufficient autonomy to resist corporations’ infiltration. While the rent-seeking corporations may be particularly concerned with their interests, the state officials have to pursue a collective interest for the country. In these Asian countries, some

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<sup>8</sup> Aoki, M. et. al. (1996) “Beyond the East Asian Miracle: Introducing the Market-Enhancing View.” In Aoki, M. et. al. *The Role of Government in East Asian Economic Development*. Oxford: Clarendon Press.1-37.

<sup>9</sup> Wade, R. (1990) *Governing the Market: Economic Theory and the Role of Government in East Asia*. Princeton, NJ: Princeton University Press.

<sup>10</sup> Kuo, Chengtian (1995), *Global Competitiveness and Industrial Growth in Taiwan and Philippines*, Pittsburgh: University of Pittsburgh Press. 1985.

authoritarian measures were adopted to preserve state's autonomy from being weakened by the business groups.

- B. **Rational Bureaucracy:** While the politicians may be influenced by the short-term political benefits, the bureaucracy must provide deliberation to formulate rational and consistent policies. These non-political elites may serve as wise designers of the state's macro-scope developing schemes.
- C. **Developmental Leadership:** The political leaders in developmental states need to show their determination to halt the economic stagnation. They have to prove that the priority in keeping economy growing would not be compromised by the institutional flaws, especially corruptions.

The DS theory on the Asian models soon encountered two challenges. The first one is *transnational capital*. During the financial crisis in 1997, the Asian Tigers were severely hit by the hot money. The Asian states' failure in controlling inflowing capital resulted in the disastrous crisis. In the 1997 crisis, these developmental states were proven incapable of governing the financial market. However, this challenge was particular threatening to the countries with more debts and opener capital inflow. For Taiwan, a much closer financial system with fewer debts, the 1997 financial crisis did not pose a lethal challenge.

For Taiwan, the bigger challenge came from the **political liberalization**.

Although the East Asian countries shared the similarity of DS, there was a variety among them in the regard of state features. The biggest difference between Taiwan and Korea/Japan was that the business-state relationship in Taiwan has been more remote, and the relatively small-sized firms have further made the influence of corporations less significant. Compared with states who kept close relationships with large corporations, such as Korea and Japan, Taiwan did not quite fit the corporatist model<sup>11</sup>, for the industrial sectors did not play significant roles in the decision-making process. Rather, at least in the authoritarian period, the Taiwanese government has kept a certain distance from corporations.<sup>12</sup>

However, with the rapid democratization in this region, the authoritarian measures could no longer be used to stabilize political order. Without authoritarianism, the relative autonomy of states would be threatened by the invasion of business interests or civil dissidents. The penetrative capacity of the states may also be compromised by the democratic institutional arrangements in all levels of the government. In addition, with periodical elections, the short-term political concerns may overpower rational planning of the long run. These factors would hinder the capacity of the government of Taiwan to remain an effective developmental state.

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<sup>11</sup> Wu Yongpin. (2004). "Rethinking the Taiwanese Developmental State." *The China Quarterly*, no. 177 (March): 91-114. Haggard S. (2004) "On Governing the Market," *Issues & Studies*, Vol 40, no. 1 (March 2004): 14-45.

<sup>12</sup> Hamilton and Biggart believe Taiwan fit in "strong-society" model, instead of "strong state" (Korea) or intermediate" model (Japan) because of Taiwan's weak business/state relation under KMT authoritarian regime. See Hamilton and Biggart, (1988), "Market, Culture, and Authority: A Comparative Analysis of Management of Organization in the Far East," *ALJS*, July 1988, S52-S94.

## **Developmental State in Taiwan: Authoritarian Past**

In Taiwan, the KMT party-state in Taiwan has a long history as a developmental party-state. In order to survive against the Communist China, the KMT regime exploited authoritarian measures in stimulating economic growth.<sup>13</sup> In *Governing the Market*, Wade listed Taiwan, Korea and Japan as strong states leading economic growth. He argued that these three countries, especially Taiwan, boosted the economy by “intervening” into the market with strong state capacity, rather than directing private sectors toward a market-oriented economy.<sup>14</sup>

The privilege of the Taiwan state in remaining its autonomy through insulation from the corporations was its unique feature. The KMT administration was an exogenous regime from the mainland China since 1950s. Therefore, the business-political connection in Taiwan appeared to be much weaker. During the authoritarian rule, the KMT regime had relied on authoritarian methods to control the society in Taiwan. Both the Leninist doctrine and the Martial Law contributed to the power concentration on the political leaders in the KMT regime. In order to receive allegiance from local political strongmen, the KMT regime built a patron-client relationship with local factions and businessmen. The KMT offered local privilege for the local strongmen to monopolize local markets to exchange for their political

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<sup>13</sup> Kirby, William C. (2004) “The Chinese Party-State under Dictatorship and Democracy on the Mainland and on Taiwan,” in *Realms of Freedom in Modern China*, California : Stanford University Press, pp113-138

<sup>14</sup> Wade R. (1990) Ibid.

allegiance.<sup>15</sup>

Gong thus argued that the previous Taiwan state was not a typical DS, but more like “party-state authoritarianism.” The KMT state penetrated into the society by building-up party branches targeting different social groups, and weaved a net of intertwined interest among different sectors.<sup>16</sup> The KMT’s strong penetration into the societal sectors allowed the state apparatus monitored and controlled private sectors, including the corporations.

Owing to the strong political domination, the financial bureaucrats in Taiwan were capable of carrying out their industrial policies without participation of private sectors. Along with foreign aids, the apolitical techno-bureaucrats deliberately sketched a series of development agendas to lead industrial sectors in economic growth.<sup>17</sup> The priority of financial techno-bureaucrat in 1970s was to nurture petrochemical industries, mostly because of its strong connections with other industrial sectors.<sup>18</sup> In 1980s, to respond to the massive competition from the other East Asian countries, the KMT administration decided to focus on the IT (semi-conductors) sector. During the 1980s, the KMT government established a huge

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<sup>15</sup> Wang, J. H. (1996) *Who Rules Taiwan: Transforming State Apparatus and Power Structure*, Taipei: Juliao Press. (in Chinese)

<sup>16</sup> Gong, Yi-jun (1998). “*Exogenous Regime” and Domestic Society: The Development of Social Foundation for Reformed KMT*. Taipei: DaoXian Publisher. (Chinese Version)

<sup>17</sup> Greene, Megan (2008). *The Origins of the Developmental State in Taiwan*. Cambridge: Harvard University Press (April 17, 2008)

<sup>18</sup> Chu, Wan-wen, (1994). Import Substitution and Export-Led Growth: A Study of Taiwan's Petrochemical Industry. *World Development*, 22(5): 781-94.

IT complex in Hsinchu. Collaborating with the state's Industrial Technology Institute (a governmental research center, also providing technical support to industrial sectors), the IT business in Taiwan soon achieved a great success, and that made Taiwan the top producer of IT products ever since.

Government-sponsored industrial research labs also provided crucial technical supports to assist corporations to upgrade their technology. Amsden and Chu proved that, since 1970s, the Taiwanese government has played a key role in facilitating latecomers to achieve success in the global market. The conjunction with government labs, which paved the way in providing needed technological assistance, contributed to this success. Besides, several state-owned enterprises (SOEs) also played along in driving rapid industrial growth for they were mobilized to provide financial supports or new market for strategic sectors. This experience was thus viewed as a paradigm of the developmental state.<sup>19</sup>

During the authoritarian regime, the Taiwan state bolstered the economy basically through tax return and subsidy. It also set up joint companies incorporating public and private sectors. Sometimes the KMT government also supported these sectors by extracting capital from financial institutions. Through banks, the government used high interests rate to attract funds and then loaned them to designated strategic

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<sup>19</sup> Alice H. Amsden and Wan-wen Chu, (2003) *Beyond Late Development: Taiwan's Upgrading Policies* (Cambridge, Mass.: MIT Press, 2003)

business sectors. In other words, many financial institutions were to serve corporations given this mechanism.<sup>20</sup> Among them, SOEs (state-owned enterprises) were the main beneficiaries. In Taiwan, instead of private firms, it was the SOEs and party-owned enterprises (POEs) that took the leadership role in policy making in the authoritarian period.<sup>21</sup>

### **The Challenge: Democratic Transition and Environmental Activism**

Like their counterparts in Europe<sup>22</sup>, environmental movements appeared to be a significant drive in democratic transition in Taiwan. During the past KMT regime, the states were able to concentrate the limited resources on the sectors that the financial bureaucrats aimed to develop without taking environmental costs into account. With KMT's monopoly in political and financial systems, the developmental state was active and thriving. However, the rapid industrial growth led to serious environmental pollutions. During a series of environmental struggles, the activists soon realized that they were actually fighting against a monster behind the industries, since these corporations were strongly patronized by the authoritarian government.

This situation inevitably led to the linkage of environmental concerns with political liberalization. During the anti-nuclear movements in 1990s, there was a

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<sup>20</sup> Wade R. (1990). Ibid.

<sup>21</sup> Noble. G. (1998) *Collective Actions in East Asia: How Ruling Parties Shape Industrial Policy* (Ithaca, N.Y.: Cornell University Press, 1998), 38-41

<sup>22</sup> Hicks, Barbara. (1996). *Environmental Politics in Poland: A Social Movement between Regime and Opposition*. New York: Columbia University Press.



well-known saying: “to oppose against nuclear plants is to oppose against autocracy,” which officially connected environmental degradation and the KMT’s authoritarian regime.<sup>23</sup> Acknowledging the political nature of environmental disputes, environmental activists thus built an alliance with political dissidents. During Taiwan’s democratic transition, environmental activism has been considered a powerful impetus to liberalize the regime in the process of democratization.<sup>24</sup> Political dissidents (formed Democratic Progressive Party afterwards) and environmental activism reached mutual benefits in mobilizing resources and gathering media attention during various campaigns. According to Tang’s research, these environmental practices provided significant momentum for democratic activism in Taiwan.<sup>25</sup>

To alleviate the social grievances brought by environmental activism, the KMT set up the EIA Act as “a safe cushion” in 1993. Since then, most major developing projects in Taiwan had to go through EIA reviews before starting the construction. The KMT tried to use this arrangement to institutionalize overwhelming environmental activism. However, as the EIA appeared to be the only public battlefield in reviewing those major projects cases, the reviewed topics could range

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<sup>23</sup> Lin Jun-Yi, (1989), *To Oppose Nuclear Plants Is To Oppose Dictatorship*, Taipei: Zhili Evening News Publisher.

<sup>24</sup> Kim Sunhyuk, (2000) “Democratization and Environmentalism: South Korea and Taiwan in Comparative Perspective,” *Journal of Asian and African Studies*, 2000; 35; 287

<sup>25</sup> Tang, C. (2000). “Democratizing Bureaucracy: The Political Economy of EIA and Air Pollution Act in Taiwan.” *Comparative Politics*, 33, (1)81-99.

from social impacts, cost-effectiveness, and to justice issues accompanied with the projects. Therefore, the EIA evolved as a public checking mechanism on the state's actions.

In 2000, Taiwan experienced the first-time party turnover. Most Taiwanese environmental activists believed that democratic transition would open a door for environmental concerns into the decision-making process after the DPP replaced the authoritarian KMT regime. Not only may the DPP be more friendly to the environmental issues given its history, the disconnection between the KMT and the developmental state may produce a better chance to evaluate previous industrial policies.

After entering into office, the DPP quickly showed a better prospect on environmental concerns. During 2000 to 2008, the DPP appointed two anti-nuclear activists, Lin Junyi and Chang Guolong to be the EPA directors in 2000 and 2004 respectively. They introduced public deliberation into the EIA procedure by allowing non-scientific experts, such as local community representatives or environmental lawyers, to be selected as EIA committee members. They opened the door of this monitoring mechanism to the public, and allowed diverse opinions to be existing in the EIA. Because passing EIA reviews was a necessary condition for any huge developing plans to begin the construction, the inclusion of social diversity into the

EIA committee thus forced the state to expose their developing policies in front of the civil deliberation.

To realize the DPP's environmental commitment to their supporters, the DPP's new president Chen Shuibian also announced that the construction of the Fourth Nuclear Plant (FNP), a very controversial establishment causing a 20-year anti-nuclear struggle, would be terminated in 2000. However, this decision would cost the Taiwan government a financial loss of 1.8 billion NTD as Taiwan would violate the contract with General Electric.<sup>26</sup> This abrupt action soon aroused a political turmoil.

The KMT-affiliated Premier Tang, who was a symbol of the coalition cabinet under the DPP president, decided to resign for the conflict. The KMT then initiated a revoke voting against President Chen. Under immense political pressure, the DPP was forced to continue the construction of the FNP. The inconsistency of policies was understood as the weakening of the state capacity in Taiwan. Most media believed that the chaotic decision-making process brought by democratic transition has undermined the state's capacity to pursue economic growth. That was a sign that the development state in Taiwan may face serious challenges after democratic transition.

However, during the DPP's second term (2005-2008), the DPP started to inherit

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<sup>26</sup> New York Times, October 28, 2000.  
<http://www.nytimes.com/2000/10/28/world/taiwan-ends-construction-of-its-4th-nuclear-plant.html>

KMT's legacy of the developmental state. The DPP began to promote several huge developing projects in Central Taiwan, all carried very considerable environmental risks. Among them, Formosa Steel-making Plant (FSP), Central Taiwan Science Park for the LCD industry (CTSP), and the Eighth Naphtha-Cracking Plant (ENP) in petrochemical industry were listed as top priorities. While there were insufficient domestic demands, even global demands, for these industries, the state insisted to push these huge projects into practices at very high environmental costs.

In order to pave ways for these projects, the DPP firstly violated the EIA Act and allowed the Hushan Dam, a new dam in Yunlin County designated to provide water supply for these huge facilities, to begin preliminary construction without the approval of EIA reviews. Although the DPP's agenda triggered a series of conflicts between the DPP and environmental groups, the DPP administration has stayed determined. During Premier Su's term (2005-2007), his dominant actions enhanced the state's "efficiency" in both the reviews in the EIA and the APC (Area Planning Committee). In addition, the Holi-Chixing plan, part of the CTSP plans, also passed the EIA review in 2006. The hasty review processes soon led to strong resistance from the EIA committee members. Some of them thus claimed that the "EIA was dead" in 2007; stating their distrust of the DPP administration.

As the KMT won the presidential election in 2008, the state's promotion of these

three major projects still proceeded. With the comeback of the KMT in 2008, the state has been “hardworking” in excluding environmental dissidents from the decision process. Through 2008 to 2010, the KMT administration kept advertising these projects and providing institutional support during the policy process. Although the Formosa Corporation has currently halted their FSP plan since 2008 due to its market strategy, the KMT administration, by adopting many expedient ways to avoid intense EIA reviews, successfully has the EIA and the APC approve the CTSP’s expansion in Erlin in 2009, with the ENP on an urgent timetable in 2010.

Most of the state actions above have suggested a typical pattern of previous developmental state, as the state tried to break the market rule. Not only did the state plan to create markets for huge productions brought by these new facilities, it also aimed to stimulate the GNP growth by investing much capital into these enterprises. Most important of all, most of the decision-makers still planned to operate them in a policy black box without public monitoring, while in fact they have encountered a series of resistance from civil groups.

**Did these events suggest a reviving developmental state, though penetrated by business interests and public monitoring, regained its dominance in a democratic regime? If yes, how can it survive the challenge of public monitoring? What is the difference between the current developmental state and the previous**

**one?** In order to answer these questions, one has to first review a relevant inquiry:

Does the developmental state of Taiwan **still** exist after democratic transition?

### **The Developmental State on the Line: Dismantled by the Democratization?**

Owing to the democratization wave in the 1990s, the role of the Taiwan state has integrated growing demands from social and business sectors. If the operation of Taiwan's developmental state were fostered by political authoritarianism, the operational patterns of Taiwan's developmental state would face critical challenges from both inside and outside.

Inside the state, the DPP has governed Taiwan from 2000 to 2008. The cleavage between the state apparatus and the previous KMT has widened. Not only has the DPP less associated with local factions and SOEs, its previous environmental positions such as "no-nuke" and "anti-ENP" would also create direct conflicts within the state. Outside the state, while the DPP has built alliances with various civil groups and donors in Taiwan, it was not surprising that they would introduce diverse opinions into the government. An open system, with the inclusion of various interests, including business interests and environmental concerns into the policy process would pose challenges on the previous developmental state.

There has been a group of literature indicating that Taiwan's developmental state status was seriously **weakened** after the democratization. Some scholars believed that

the developmental Taiwan state was dismantled once the authoritarian developmental state no longer existed. After the dismantling, the state apparatus has lost the capacity to formulate and implement consistent industrial policies. The state thus transformed into opportunism, seeking for its own survival and system maintenance.

After examining the DPP's economic policies, Wu Yong-ping suggested that the state of Taiwan, after democratization, could hardly be called as a "developmental state." Instead, the unorganized policy outputs and the facts that bureaucrats paid little attention to economic development would make Taiwan a weak economic "dirigisme."<sup>27</sup> Some scholars have proved that the DPP administration after 2000 party turnover constantly delivered self-conflicting agendas. Policies were seriously intervened by various interests groups. The case of "revoking the fourth nuclear plant" was a typical example illustrating the DPP's inconsistency in terms of their policy decisions. The economy decision-making thus fell into chaos and deviated from the model of developmental state.<sup>28</sup>

Based on the DPP's performance during 2000-2006, Wu Yushan has proposed that the developmental state in Taiwan was replaced by interest politics, while the state capacity was serious undermined. Wu thus stated that the democracy regime has compromised the effectiveness of Taiwan's developmental state. Since democracy

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<sup>27</sup> Wu Yong-Ping (2004) Ibid.

<sup>28</sup> Wang Zhenghuan and Su Yaochang, (2002) "The Successes and Declines of the Developmental States: Case of Taiwan and Hong Kong," paper presented in Annual Taiwan Sociology Conference 2002.

was created to reconcile different demands in the society, conflicts between the notion of democracy and the previous developmental state was inevitable.<sup>29</sup> In other words, according to the research, the failure of the Taiwan state in remaining monopolizing the policy process after democratic transition resulted in the degradation of Taiwan's developmental state.

These arguments seemed to suggest that the Taiwan state in the democratization era, with the intrusion of various interests, lacked the capacity to propose or implement consistent and efficient policies. Even when the state officials adopted the previous developmental approaches, the result was proven unsatisfactory. For instance, Chen Yi-tsong's research on the software industry under the DPP regime also suggested that the DPP administration, though aimed to develop new sectors by enthusiastically establishing pilot agencies, turned out incapable of providing resources in the nursing stage.<sup>30</sup>

Not only was the state's capacity seriously questioned, the relative autonomy in the authoritarian KMT regime in Taiwan has also surrendered to business interests in the process of democratic transition. According to Chu Yun-han, the business-government relationship has drastically changed during democratic transition. Corporations started to possess significant influences in the political realm.

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<sup>29</sup> Wu Yu-shan, (2007) "Taiwan's Developmental State: After the Economic and Political Turmoil," *Asian Survey*, VOL. XLVII, No. 6, November/December 2007

<sup>30</sup> Chen Yi-tsong (2003), *State and Software Industrial Growth in Taiwan*, Master Thesis, National Sun Yat-Sen University in Taiwan. 2003.



What Wade described about the remote distance between political leaders and corporations in the authoritarian Taiwan has turned into a much closer companion now.<sup>31</sup> Chin also pointed out that the emergence of “Black Gold,” a combination of business groups and organized crime mafias, during democratic transition, has undermined the state autonomy, as state policies were often intervened by these new agents.<sup>32</sup> With vast business interests flooded into the decision-making process, the Taiwan government seemed to have surrendered itself to these new powerful agents.

Most of the literature above suggested that while the authoritarianism declined, the Taiwan state’s capacity in presenting rational and consistent policies was seriously weakened. In the events of FSP, CTS and ENP cases, similar situations occurred. During the review sessions of these projects, high-ranked politicians constantly revealed their closeness toward corporations, and some even endorsed the projects without knowing the features of the facilities under review. Through personal connections between political elites and business elites, corporations expressed their detest against EIA reviews and even threatened to withdraw the projects. The policies also made efforts to escort these projects in different forms. These series of pro-business behaviors were criticized by civil groups, especially during the DPP

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<sup>31</sup> Chu Yun-han, (2003) “The Realignment of Business-Government Relations and Regime Transition in Taiwan,” in *Business and Government in Industrializing Asia*, ed. Andrew MacIntyre (Ithaca, N.Y.: Cornell University Press, 1994), 113-41

<sup>32</sup> Chin Ko-lin, (2003) *Heijin: Organized Crime, Business, and Politics in Taiwan* (Armonk, N.Y.: M.E. Sharpe, 2003)

administrations, for their supporters were more inclined to opposing these high-pollution projects. The business-friendly actions taken by both Presidents and Premiers may be considered a proof of “lack of state’s autonomy.”<sup>33</sup>

Regarding the state’s inclinations to economic growth, there was a fine line between “planning long-term economic growth” and “sheltering business sectors.” While the former was the fundamental nature of a developmental state, the latter suggested the state’s dependency on the corporations. While reviewing the DPP’s policy on the IT sectors, Tu believed that the state of Taiwan had surrendered itself to the corporations during the DPP administration. She argued that the IT business in Taiwan has played a dominant role on the DPP’s policy-making procedures. While the expansion of IT sectors faced serious health risks as well as very arguable profitability, the DPP administration still played along with the IT business communities in facilitating their expansion projects. Tu concluded that the state “played a comparatively small part in controlling and directing the development of the high-tech industry,” but “gave their dedication to the expansion of IT business.”<sup>34</sup>

Tu believed, that this “power asymmetry<sup>35</sup>” between the Taiwan state and

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<sup>33</sup> Ever since the DPP started their term, the corporations showed their impatience against strict environmental standard. They publicly claimed that these standards are partly responsible for Taiwan’s economic decline. They even file their complaint to the President Chen. The worst of all, the President Chen announced that he would “knee down in front of the EIA members” to help corporations to pass the EIA reviews. <http://www.libertytimes.com.tw/2001/new/aug/17/today-s1.htm>. Some politicians stated that the EIA review was the obstacle of Taiwan’s economic growth, even after 2008.

<sup>34</sup> Tu Wen-lin, (2007) “IT Industrial Development in Taiwan and the Constraints on Environmental Mobilization.” *Development and Change*, Vol. 38, No. 3:507-27.

<sup>35</sup> While the Taiwan state constantly spent huge public resources to invest on IT sector, the tax brought

business sectors illustrated the state's incapability of retaining its own autonomy against the corporations. Therefore, the state of Taiwan after democratic transition did not play a guiding role as it used to do. Instead of designing the long-term development of key sectors, the state became a promoter of industrial expansion without evaluating the efficiency and the legitimacy of its strategies.

To explain this asymmetry, Ho thus tried to provide a "political exchange" explanation for the DPP's subordination to business interests. He argued that due to the fact that the DPP's social foundation was not solid enough, the DPP had to make compromises to the business community in exchange for their support. It was the "weak state" that caused the invasion of business communities.<sup>36</sup> This intrusion jeopardized the core of a developmental state.

### **Weak Administrations or a Weak State?**

This dissertation suggests that although the developmental state appeared not to function very well during the DPP's terms, it may be a little hasty to claim that the "state" was weak. Since the oppositional party, KMT, has constantly consisted of more than a half, sometimes even two thirds, of the seats in the Legislative Yuan, the DPP was no doubt a weak administration. The DPP political leaders' cooperation with

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by the IT sector was not as significant enough compared with their political influence. Hsia, C. W. (2000) 'How Many Science parks are needed in Taiwan?', *Common Wealth Magazine*: 228: 103–11.

<sup>36</sup> Ho Ming-sho (2005) "Weakened State and Social Movement: the paradox of Taiwanese environmental politics after the power transfer," *Journal of Contemporary China* (2005), 14(43), May, 339–352.

business interests suggested that the DPP had to compromise as a minority in the Legislative Yuan, but it did not necessarily refer to a weak status of the Taiwan state.

First, while most of the literature focuses on the state actions during early DPP administrations, it may overlook the fact that the DPP administration was a novice in office. Without any governing experience before 2000, the DPP was very unfamiliar with running a government. The so-called “decline of the state’s capacity” in coordination and policy formulation may be highly associated with the DPP’s long-time isolation from administrative bureaucrats and SOEs.

Second, the “weak state” in Taiwan, described by Ho, may only refer to the DPP’s weak administration under a semi-presidential system, not “state” per say. The political and institutional foundation of the DPP was relatively weak. President Chen earned only less than 40% of the votes in the election in 2000 and only won with slight margin in 2004. In addition, through 2000 to 2008, the DPP never was the majority in the Legislative Yuan. The weak political status may drive the DPP administration to seek for more collaboration from business groups. This was a rational and reasonable decision.

However, if this “weak state” was caused by the DPP’s lacking governing legitimacy, then how can one explain the KMT’s embracing very similar industrial policies after 2008? The KMT had very little need to make political exchange with

the business groups, for political foundation of the KMT has been very stable since 2008. Not only has President Ma defeated the DPP candidate by a 17% margin in the 2008 presidential election, the KMT also consisted of more than two thirds of the seats in the Legislative Yuan. Such a strong foundation made it less necessary to make political exchange with business groups. However, the KMT administration after 2008 in fact adopted more ambitious actions in pushing those controversial agendas. Therefore, there may be another factor, other than political exchange, guiding the KMT administration to carry out these projects.

Third, if the state were “kid-napped” by business groups, it would be odd to see politicians, both from the DPP and the KMT, make pledges in front of public occasions, since most political agendas within the state would naturally fulfill corporations’ demands. The reason that the political leaders had to echo with the business groups in public occasions was that they had difficulties to control the state. If corporations dominated the state, the political leaders did not have to debate with EIA members on the media such as newspapers. By the same token, the fact that corporations sought rents through electoral political leaders may imply the fact that they had difficulties having their interests well taken into consideration in decision-making processes within the state.

Fourth, the “weak state” notion may over-simplify the interest struggles between

different development agendas within the state. For example, the establishment of the FSP would directly conflict with the China Steel, a SOE with monopoly status in steel production in Taiwan. It then brought a debate on the efficacy of establishing the FSP under a monopolizing market. In addition, the EPA's concerns about the huge amount of carbon emission brought by these energy-intensive facilities may also reflect their take on economic development, since the upcoming carbon trade may create new markets for carbon quota and low-carbon products. Therefore, the short-term chaos on the policies may not be caused by the decrease of "state capacity," but rather a shift of development agendas.

Therefore, **this dissertation argues that this weak foundation of the DPP administration was NOT equal to a weak state. It would take a learning process to adapt while various new interests flooded in. The state had to learn via a trial-and-error process. This learning did not compromise the value of the developmental state.**

In fact, the authoritarian KMT regime also experienced a long learning process after it migrated to Taiwan. As Greene stated, the top concern of Taiwan's political leaders at that time was "political survival," instead of "industrial development." Yet, the developmental state still emerged gradually as a result of the combined efforts of technocrats and outsiders, including academicians and foreign advisors. Therefore,

the rise of a developmental state may require a long-term learning process for both political leaders and economic technocrats in the KMT era.<sup>37</sup>

As a result, despite that one may conclude that, to some extent, the DPP may have shifted to a more “corporation-friendly” position; it did not necessarily mean that the developmental state was weakened. Thus, research proposes that **the state can transform itself while preserving other important features of being a developmental state.**

#### **The Puzzle: The Rejuvenation of the Developmental State?**

The author compared three grand industrial projects (FSP, CTSP, and ENP) promoted by both the DPP and the KMT administrations. During 2004 to 2010, different corporations and the MOEA (Ministry of Economic Affairs) in Taiwan have proposed these three major projects. Although they represented different industries, they did share similarities to remark the existence of the developmental state in Taiwan.

These three projects were all planned to start in Central Taiwan, where agriculture remained the main sector in local livelihood. All of them were energy-intensive and capital-intensive industries (steelmaking, LCD, and petrochemical industries). Although the corporations had strong wills to migrate to

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<sup>37</sup> Greene, Megan. (2008). Ibid.

China since all of these three industries faced problems of over-production in Taiwan, the MOEA still preferred to endorse these grand projects in central Taiwan. The cost-efficiency calculation and possible environmental costs caused by these projects soon became hot topics for public debate.

The existing literature believed that the current Taiwan state was penetrated by special business interests through a two-step procedure. Business groups may try to influence the electoral politicians by providing political resources or donations. After being elected, the politicians then exerted their political power to acquire the compliance of the bureaucracy. The business interests compromised the state's autonomy through this cycle. The author, however, has different propositions in this dissertation.

First, in these cases, one did see the state was trying to block the industries from conducting important investments in China or Vietnam. During 2005 to 2010, there were five administrations, both from the KMT and the DPP; nevertheless, the policies toward these industries appeared very consistent. While those corporations strongly urged the government to grant their new investment in China, where the main future demands of their products would come from, the Taiwan government kept asking them to conduct a huge-scale project in Taiwan to avoid their capital outflow.

The government postponed the corporations' quests with various technical



measures while this action would certainly violate the interests of these industries. At the same time, these industries also were not able to penetrate into policy-making processes even after exerting personal connections with politicians. The state bureaucrats determined that these industries were key elements in sustaining Taiwan's development, and therefore had prepared "a road map" for these industry giants to follow. Even when one of the LCD corporation, AOU, finally received positive responds from Premier Wu on the migration, the MOEA director still refused to approve the AOU's migration to China and claimed that the MOEA needed to review this capital outflow "article by article."<sup>38</sup> In other words, the electoral politicians were not that powerful in delivering business interests into the policy-making procedure within the state.

In addition, when the MOEA decided to promote these projects, the bureaucracy constantly exerted strong mobilization in the review procedures.<sup>39</sup> They persuaded different Premiers to pursuit these goals and even adopted administrative expediency to avoid possible challenges from monitoring mechanisms. In fact, with some learning, the DPP administration became as experienced as the KMT in excluding "obstacles" in the review process. Both parties adopted several procedural measures

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<sup>38</sup> China Times, Dec 12, 2010.  
<http://news.chinatimes.com/forum/0,5252,11051401x112010121300280,00.html>

<sup>39</sup> For example, the Industrial Bureau has mobilized local factions to join the social campaign against environmental activists, and put advertisement on the newspaper in supporting the ENP. See PTT News, Dec. 14, <http://pnn.pts.org.tw/main/?p=17192>.

to guarantee the result of the EIA review.<sup>40</sup> Therefore, this research argues that the MOEA remained strong in formulating industrial policies and wielding political influence even after democratic transition.

Second, while the developmental MOEA has been interested in promoting huge-scale projects in Taiwan to realize their plans since the authoritarian period, **the participation of civil and environmental groups into policy-making granted by democratic institutions strengthened the state's checking mechanisms to avoid making mistakes.** As most huge plans had to go through EIA reviews, the participation of environmental groups successfully corrected the state's failures by including external costs into policy decisions.

The environmental groups utilized institutional and media strategies to arouse social attention to these huge projects bolstered by the state and corporations. They even adopted legal approaches to cause huge troubles to the bureaucracy system. The widespread suspicions from scholars and local communities also lengthened the EIA procedure. Therefore, the extremely high costs from time-consuming EIA procedures made the state and business groups to abandon some controversial case like the FSP. In the long run, the massive participation from civil groups in the checking mechanisms enabled the state to self-correct and generate more cost-effective

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<sup>40</sup> For example, the EPA amended the rule of selection and excluded radical activists from being selected as EIA member in 2007. In addition, the auditing of civil groups in the EIA review was also cancelled.

policies.

In brief, **the conclusion of “a declining developmental state of Taiwan” in the literature seemed to overlook the strong dominance of economic techno-bureaucrats in Taiwan, because it assumed that it was the electoral politicians that mainly directed the economic plans.** In opposite, the electoral features actually made the politicians more concerned with economic growth. While administrations under the democratic semi-presidential system may be more short-lived, the electoral politicians did not have enough expertise to guide economic growth. Rather, they were easily to be persuaded by strong techno-bureaucrats coming from the MOEA system.

On one hand, the dominance of techno-bureaucrats was preserved since most of the MOEA directors after democratic transition were still selected from the MOEA system, particularly from the Industrial Development Bureau. On the other hand, the more institutionalized and open checking mechanisms shaped by the democratic regime have created more possibilities of deliberation in correcting the MOEA's arbitrary decision-makings.

Therefore, this paper argues that, **though some parts of Taiwan's developmental state were weakened by democratic transition, the core of the developmental state of Taiwan did not decline during the democratic transition**

**with the remaining strong power of the techno-bureaucracy in controlling the capital. Furthermore, the democratic transition even brought new momentum by reinforcing the monitoring mechanisms.** The long and seemingly chaotic review processes may reflect the self-correcting process by adding external costs into policy deliberation. The purpose of this dissertation is to suggest that the developmental state in Taiwan remained very lively, while some adaptations have been made. The state even gained new energy and became more accountable in the democratic regime.

## Chapter 2 Literature Review on the Developmental State, Its Democratic Implications, Parameters, and Methods

With the growing political liberalization, the Taiwan's developmental state pillared by the authoritarian regime was challenged by growing business interests and other social grievances. The literature presumed that while the KMT authoritarianism was dismantled by democratization, its twin brother, the developmental state, would also be weakened. Wu Yongping thus believed that the developmental state was intrinsically "incompatible" with democratic regimes<sup>41</sup>. However, this proposition may be misleading, for it overlooked the ability of evolution of the developmental state. This dissertation argues that **the developmental state, to some degree, can co-exist with a democratic regime, and even be strengthened by the democratic system.**

### **Developmental State and Democracy: Compatibility**

The reason that the developmental state may be incompatible with the democratic system was that the strong infiltration of short-term rent-seeking behaviors of corporations would jeopardize the long-term rationality of national development<sup>42</sup>. Olson particularly emphasized the potential danger of massive **distributive coalitions**

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<sup>41</sup> Wu Yongpin (2004). Ibid

<sup>42</sup> Schleifer and Vishny, 1997. "A Survey of Corporate Governance," *The Journal of Finance*, Vol 2, No.2, 1997.

in the democratic system that would hinder economic growth<sup>43</sup>. These special interest groups representing small numbers of firms in oligopolistic industries would pursue monopolistic or protectionist legislations. Such legislations in democratic systems could damage the economy, especially for some groups (also called **encompassing coalitions**) unable to organize themselves due to their great size that would then have to “suffer in silence.” His work in 1996 with McGuire also suggested that democratic systems, in contrast with one’s intuition, tended to adopt a short-term perspective and limit economic redistribution<sup>44</sup>. Therefore, it led to the conclusion that authoritarian states were more capable to resist these special interests from private investors<sup>45</sup>.

The previous developmental state theory seemed to be valid because authoritarian regimes in East Asia offered strong state autonomy to counter special private interests and consistently to provide public goods<sup>46</sup>. This insulation of the state to social sectors, assured by the authoritarian regime, eluded the infiltration of private interests into the state decision-making system. Therefore, democratic transition, by theory, may pose an immediate challenge on the capacity of these states.

However, there are two problems with this notion. First, while the politicians may face the lure of private interests in any political system, democracy may be the only

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<sup>43</sup> Olson, Mancur (1982), *The Rise of Decline of Nations*, Yale University Press.

<sup>44</sup> McGuire, Martin C. and Mancur Olson, Jr. (1996). The economics of autocracy and majority rule. *Journal of Economic Literature* 34:72-96.

<sup>45</sup> Olson, Mancur. (2000). *Power and Prosperity*. Norton.

<sup>46</sup> Haggard, Stephen.(1990). *Pathway from Periphery*. Cornell University Press.

system offering them a better incentive to look after the majority. Bueno de Mesquita argued that the need of politicians to form a winning coalition would inspire them to provide more public goods<sup>47</sup>. If politicians sensed that providing public goods such as economic development was crucial for their re-elections, they would have more incentives to resist special private interests and would grant more power to economic bureaucracy. Therefore, “contending for office” in the democratic system may be an advantage in promoting better economic policies.

Przeworski’s research in 2000 revealed that contending democracies had superior economic growth outcomes compared with dictator regimes during 1950 to 1990. They also reported lower birth rates, lower infant mortality, and longer life expectancy<sup>48</sup>. It offered an empirical proof that contentions may hold the state more accountable in pursuing the state’s encompassing interests.

Second, another important feature of democracy is open participation of all social sectors into the political system. While an open political system provides more channels for rent-seeking interests, it offers equal opportunities for encompassing coalitions to enter the system. If there are equal institutional channels for civil groups to be viable in the decision-making system, the power of distributional coalitions can

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<sup>47</sup> Bueno de Mesquita and Bruce and Hilton Root (eds) (2000). *Governing for Prosperity*, Yale University Press.

<sup>48</sup> Adam Przeworski; Michael E. Alvarez, Jose Antonio Cheibub, Fernando Limongi (2000). Adam Przeworski. ed. *Democracy and Development; Political Institutions and Well-Being in the World, 1950-1990*. New York: Cambridge University Press.

be better restrained.

There was cross-country research in India, Africa and Latin America suggesting that democratization may not better promote economic growth or human development. However, Sklar proposed that the deficiency of "developmental estates" in these countries such as professionals and government workers indicated failure of these countries in building a "developmental democracy"<sup>49</sup>. In these countries, lacking of substantive civil participation into the decision-making institutions contributed to the weak connections between the democratic system and rational economic growth<sup>50</sup>. In other words, it was the absence of developmental capital causing the laggard development, not democracy per say.

Particularly to the developmental state, meaningful participation of civil sectors in the decision-making process has two folds of functions: 1) it can form an encompassing coalition and help the state counter special interests; 2) it operates as a checking mechanism to correct possible decision mistakes made by developmental states.

During 2004 to 2010, there were some facts suggesting that both features, contention and participation, of democracy, may cause a short-term chaos when the

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<sup>49</sup> Sklar, Richard L. (1996). "Towards a Theory of Developmental Democracy." In *Democracy and development: Theory and Practice*, ed. Adrian Leftwich. Cambridge: Polity.

<sup>50</sup> See Kaviraj, Sudipta. (1996). "Dilemmas of Democratic Development in India." In *Democracy and Development*, ed. Adrian Leftwich. Cambridge, MA: Polity Press; Also See Pinkney, Robert. (2001). "Democratic Consolidation and External Pressures: The Experience of East Africa." In *Towards Sustainable Democracy in the Third World*, ed. Jeff Haynes. New York: Palgrave.



developmental state legacy in Taiwan collided with an open political system. However, both features eventually drove the developmental state to a much more consistent and accountable direction after a short shock.

### **Taiwan's Implication: Democratic Contention as an Adjustment of the Developmental State**

While the literature made comments on inconsistent and unsatisfactory performance of Taiwanese governments as a developmental state after democratic transition, it may have over-estimated the chaos during policy adjustment in the early DPP administration. In fact, some facts during the late DPP administration revealed that the developmental state still functioned as policy guidance. The political turmoil during the democratic transition was actually *the result, not the cause*, of this DPP's intervention in the developmental state.

After the party turnover, the DPP tried to replace the political appointees from outside sources other than the bureaucracy. The appointment of a professional business manager, Lin Xinyi, from the automobile industry as the director of the MOEA was a clear attempt that the DPP would like to create a new decision-making network. Lin Xinyi also successfully implemented the "no-nuke" principle from the DPP, and announced to discontinue the construction of FNP. This decision stirred a great political struggle during 2001 to 2002, and Lin was forced to resign from the

MOEA director in January 2002. President Chen also faced a revoke voting in the Legislative Yuan because of this no-nuke decision.

After Lin Xinyi resigned, the DPP tried recruiting another business manager, Chung Caiyi, as the MOEA director, but Chung could not survive two months because of strong resistances from the KMT-controlled Legislative Yuan and the MOEA inside. Ever since then, between 2002 and 2010, each MOEA director was promoted from within the MOEA system, both in the DPP and the KMT regimes. The DPP's short attempt in breaking the core of the developmental state thus failed, and it was also assimilated by the MOEA's advisory group when the DPP needed to deliver scoring sheets on economic growth. The DPP's inclination to fundamental environmentalism at the early stage was soon transformed by their desire to form winning coalitions. During the transformation, the MOEA bureaucrats possessed significant power in influencing political appointees. While Wu Yongping considered that the economic bureaucracy's subordination to political concerns should be mainly responsible for the low penetrative capacity of the Taiwan state during the early stage of democratic transition, the techno-bureaucracy in fact re-gained their dominance after a short period of adjustment.

Due to techno-bureaucracy's assimilation of elected politicians, the state's performance in both the late DPP administration (2005-2008) and the early KMT

administration (2009-2010) on these industrial sectors were quite consistent. The MOEA dominated the agenda and tried to implement their plans by persuading the DPP administration that keeping the economy growing was the final solution to ensure the governance and that the MOEA was the only reliable advisor to operate the state's economy. The DPP cabinet admitted that that "when it came to economy, the MOEA staff always gave us great pressure<sup>51</sup>."

In addition, since the DPP was not included in the policy network under the authoritarian regime, it introduced more participation of private sectors into the decision-making process. A research on the development of Nano-science in Taiwan suggested that the DPP administration, with no previous experience could be learned in Nano-science was able to build a partnership with private sectors through formal and informal channels<sup>52</sup>. The success of Nano-science in Taiwan thus proved that the inclusion of private interests into political realms may contribute to a satisfactory development.

Tsai also believed that the statist legacy of developmentalism in Taiwan remained very active even after the state conducted a series of liberal reforms during democratic transition. Despite the MOEA drew more attention to semiconductor and electric industries, the previous connection between the state and some traditional

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<sup>51</sup> This was based on an interview with a DPP cabinet member.

<sup>52</sup> Chen Yizhen, (2009) "*Taiwan National Science and Technology Program for Nanoscience and Nanotechnology: Industrial Policy Analysis under DPP administration (2000-2008)*," Taiwan: National Chengchi University, 2009.

sectors remained strong<sup>53</sup>.

Therefore, the DPP's policy shift from "fundamental pro-environment position" to "inheriting developmental statist legacy" during their terms may reflect the evolution of the developmental state of Taiwan under a democracy. It proved that the developmental state can survive both democratic transition and partisan shift after a period of adjustment.

### **New Development, New Developmental State**

A developmental state, by theory, is expected to pursue the state's maximum national development. However, the definition of successful development may appear a constantly-changing parameter over time. In fact, the meaning of "development" has also evolved while including more and more externalities in the categories of development. For instance, a shift of value has happened as people in developed countries turned to pursue a new paradigm after achieving material abundance<sup>54</sup>. Similarly, in Taiwan, Tong observed that economic growth has provided two stimuli for emerging environmental activism. Not only has the fast industrialization caused serious environmental degradation, people also changed their priority of lives. There have been new social demands on the issues of development when some have reached

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<sup>53</sup> Tsai Ming-Chang. (2001) "Dependency, the State and Class in the Neo-liberal Transition of Taiwan," *Third World Quarterly*, Vol 22, No.3, pp359-379, 2001.

<sup>54</sup> Ronald Inglehart and Wayne Baker (2000). "Modernization, Cultural Change and the Persistence of Traditional Values" (PDF). *American Sociological Review* 65: 19–51.

a certain level of material abundance.<sup>55</sup>

Upon this century, Sen's theory on "human development", by adding various externalities into calculation, represented a wide array of life quality/environmental protection parameters of economy growth.<sup>56</sup> In 1987, WCED (United Nations World Commission on Environment and Development) published "Brundtland Report" to introduce the concept of "sustainable development." This document defines sustainable development as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs."<sup>57</sup> In 2005, the United Nations 2005 World Summit Outcome Document gave a more concrete context of sustainable development. The concept of sustainable development should refer to "economic development," "social development," and "environmental protection."<sup>58</sup> These three parameters are pillars of sustainable human development. States' efforts on promoting social equity and environmental protection thus are all considered efforts in fostering "development." More concisely, any state that wants to be "developmental" needs to focus more intensely on people and their skills, instead of on machines and their owners.<sup>59</sup> Therefore, the inclusion of various social groups

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<sup>55</sup> Tong Yanqi, (2005) "Environmental Movements in Transitional Societies: A Comparative Study of Taiwan and China," *Comparative Politics*, Vol. 37, No. 2 (Jan., 2005), pp. 167-188

<sup>56</sup> Sen, Amartya. (1999), *Development as Freedom*, New York, NY: Knopf.

<sup>57</sup> *Our Common Future*, Chapter 2: Towards Sustainable Development.  
<http://www.un-documents.net/ocf-02.htm>

<sup>58</sup> *2005 World Summit Outcome Document*, World Health Organization, September 15, 2005.  
<http://www.who.int/hiv/universalaccess2010/worldsummit.pdf>

<sup>59</sup> Evans, Peter (2010), "The Challenge of 21st century Development: Building Capability-Enhancing States," UNDP paper,

into the decision-making process in order to provide more services appears very crucial in pursuing the new form of development.

If a state chooses to shift its development focus from some sectors to the others in different stages, it may be merely a “categorical difference” on national agendas. For example, a state, which finds it struggling in continuing previous expansive policies on the petrochemical industry, may suggest that some old principles have faced challenges, but **it does not necessarily refer to a decline of national capacity**. Therefore, it would be risky to argue Taiwan’s developmental state was declining based on the changes of policy consistency in one single sector. While the term of “development” in the above literature sometimes only refers to “growth” in certain industrial sectors, it may overlook the fact that the state may have different goals to achieve in ensuring its long-term national development. Economic growth based on depriving the minority and the ecosystem may increasingly face harsh social challenges.

Therefore, a good “development” requires multiple lenses for judgment. However, the goals for development can sometimes be complex as they involve different categories of development as time changes. It requires consistently updating inputs in order for the state to choose developmental strategies wisely. A mechanism allowing

broad inputs may hence be essential in order to make sure that the information received was comprehensive enough. Sen argues that democratic governance is crucial on national development for three reasons. First, democracy is *intrinsically* good insofar as it enables people to exercise their political rights and participate politically. Democracy is also *instrumentally* good, because democracies tend not to fight each other and in bad times democracies are more responsive than non-democracies to human needs and economic well-being. Finally, democratic governance is “**constructively**” good insofar as it provides institutions and processes in which people can define their own needs, well-being, and priorities.<sup>60</sup> Therefore, in order to pursue a better development, democratic value and institutional arrangements seemed to be preferable.

There has been a broad consensus among developmental experts, policymakers and aid donors to view “good governance” as a pre-requisite to sustained increases in living standards.<sup>61</sup> With the evolutions of human services-oriented “development,” a developmental state also needs to evolve to redefine “development” within the state. By integrating various voices with elements of life equity and environmental protections into political institutions, the state can make wiser decisions through this

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<sup>60</sup> See Amartya Sen and Jean Dreze, *India and Participation* (Oxford University Press, 2002), ch. 1 and 10.

<sup>61</sup> Kaufmann, D. Kraay, A. and Zoido-Lobaton, P. (2000) ‘Governance Matters: From Measurement to Action’, *Finance and Development*, 37, No. 2 (Washington, D.C.: International Monetary Fund). Also see Knack, S. (2003) *Democracy, Governance and Growth*. (Ann Arbor: University of Michigan Press, 2003).

deliberative approach.

In a research on Taiwan's financial policies during the DPP's term, Tang confirmed that the pluralization of rent-seeking actors in the democratization process has changed the outcomes of Taiwan's financial policies. However, while the new actors have "politicized" the financial reforms, new interests created by pluralization also liberalized the black box of decision-making mechanisms in Taiwan.<sup>62</sup> The process may appear messy to some extent, but the inclusion of more players has ensured citizens' confidence to democratic regimes.

Therefore, the inclusion of different voices within the state through these channels may help the state to make decisions that are more rational. With more participation from civil sectors into the mechanisms, the developmental state can be more "developmental" in looking after encompassing interests. In this sense, with the growing variety of developmental agendas, participation of non-state actors was crucial. A fine developmental state may be intrinsically connected with an opener political system.

### **From the Developmental State to Interdependent Governance?**

The concept of developmental state refers to a developmentalism mainly led by a strong state. This state remains their dominant status over rent-seeking behaviors and

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<sup>62</sup> Tang, Alexander, (2009) "The Politics of Financial Reform in Taiwan: Actors, Institutions, and the Changing State, *Asian Affairs*, Vol. 36 Issue 4, p201-212.



possesses the power to resist these interests within or outside the state. It, by theory, does not have to be necessarily authoritarian nor exclusive. The critique against the developmental state theory often includes the state's inability to deliberate. The state may fail to keep up with the fast-changing market demands or to efficiently distribute resources.

To be more explicit, one of the common problems of the developmental state theory would concern “**opportunity costs.**” The state's efforts on cultivating certain sectors may be profitable in the market in a given range of time. However, from the state's perspective, it can be proven successful only on a comparison basis. For instance, although the investment in the petrochemical industry may seem less necessary since petrochemical products can be imported, the establishment of advanced petrochemical facilities in Taiwan may complete the supply chain and also provide infrastructures for other industries. Therefore, without assessing the opportunity costs, the evaluation of the state's policy choice is flawed.

Another important parameter often overlooked in a developmental state is “**external costs.**” While the support of a certain industrial sector would bring impacts on natural resources and the environment, the external costs brought by the production are easily overlooked on the market. The state's capacity in making good choices can be easily twisted if external costs were left out. A state may be

economically beneficial to some sectors but “predatory” for the rest of the society. As an agent standing for collective interests, a developmental state needs to be evaluated from a collective cost/benefit perspective. The inclusion of external costs into the decision process was crucial for the bureaucracy to make rational judgment.

The biggest problem of the literature of the developmental state is their sole statist lens. Some argue that Taiwan’s developmental state has declined, mostly because they presumed a confronting dichotomy between a developmental state and participatory social actors. This research proposes that it would be unfair to adopt a pure statist approach to examine a state under a functioning democracy. A powerful developmental state undoubtedly needs to remain its autonomy from constant intervention of distributional coalitions. However, the creation of encompassing coalitions by including more social voices into institutional channels may enhance the state’s capacity in blocking rent-seeking behaviors and allow the state to adjust its decisions and have better chances to reach optimal policy outcomes.

In fact, while strong states may discourage investors because of absence of checks, weak states may also fail in providing necessary public goods. A balanced distribution of power between state and society is therefore necessary to encourage investments by both citizens and those controlling the state apparatus.<sup>63</sup> Therefore, the

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<sup>63</sup> Acemoglu, Daron. (2005), “Politics and Economics in Weak and Strong States”, *Journal of Monetary Economics* 52 (2005), pp 1199–1226.

participation of social sectors into the state through open political channels may not necessarily weaken the state's autonomy. By actively integrating the various interests from societal sectors into the policy process, the developmental states may have a new evolution.

While the private firms have to evaluate the cost/benefit upon conducting investments, the state has to create a good reputation in guiding the development. In this case, even "genuine" developmental states have to show their creditability to attract the capital of private sectors.<sup>64</sup> In other words, cooperation and communication with private sectors were always required in the policy process, even for authoritarian developmental states. Pempel thus used the term "developmental state regime" to describe the interactive relationship among state officials, institutions, capital and social actors<sup>65</sup>.

Evans's early works on "embedded autonomy" has illustrated the interactive nature of states' autonomy, both in authoritarian and democratic regimes. For Evans, the embedded autonomy was a dense network of social ties enabling the government to negotiate national goals with business sectors,<sup>66</sup> These developmental states, even under authoritarian regimes, did not gain their autonomy through complete insulation

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<sup>64</sup> W.G. Huff, G. Dewit and C. Oughton. (2001) "Building the Developmental State: Achieving Economic Growth Through Co-operative Solutions: A Comment on Bringing Politics Back In," *The Journal of Development Studies*, Vol.38, No.1, October 2001, pp.147–151.

<sup>65</sup> Pempel, T.J. (1999). "The Developmental Regime in A Changing World Economy," In *The Developmental State*, ed. M. Woo–Cumings. Ithaca: Cornell University Press.

<sup>66</sup> Evans, B. (1995). *Embedded Autonomy*, Princeton University Press.

from societal sectors. If the state bureaucracy had remained disconnected from industrial elites, it would have been ill-informed and ineffectual. Therefore, unless the social ties were broken, democratization or globalization would not eliminate the foundation of the developmental state.

Weiss believed that the dichotomy between state and society was no longer relevant after democratic transition. Though remaining autonomous and influential, the democratized states may still seek for partnerships with various social actors in terms of national development. Through this partnership, the state can be more capable of responding to global and domestic challenges.<sup>67</sup> Weiss also believed that the path-dependent nature would make it difficult for Asian countries to adopt the American model of liberalization after democratization, for states still have the basic needs to control the capital.<sup>68</sup> In other words, through a series of adaptations, developmental states in East Asian countries will be very likely to survive and transform to this “governed interdependence.”<sup>69</sup>

To be more concrete, while democracy has introduced new forms and new dynamic elements to the politics and expanded the capacity of ordinary people to play a larger role in political life, the “state capacity mostly draws on old foundations.”<sup>70</sup> It

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<sup>67</sup> Weiss L. (1998) *The Myth of Powerless States*, Ithaca: Cornell University Press.

<sup>68</sup> Weiss L. (2000) “Developmental States in Transition: Adapting, Dismantling, Innovating, not ‘Normalizing,’” *The Pacific Review*, Vol. 13 No. 1 2000: 21- 55.

<sup>69</sup> Wong, J. (2004). The Adaptive Developmental State in East Asia. *Journal of East Asian Studies*, 4, pp 345-362.

<sup>70</sup> Marsh I. (2006) “Democratization and State Capacity in East and Southeast Asia,” *Taiwan Journal*

is difficult for the statist legacy to perish after the transition, and the democratic system also demands an effective state to lead the developmentalism. Therefore, it would be a wiser decision for democratic elites to sustain the developmental state instead of dismantling it.

As Weiss and Evans suggested, the state's autonomy was never a byproduct of authoritarianism. The developmental state may have to go through a process of adaptation in the democratic era, since both the players and tasks were very different. The process of adaptation may not be very smooth, but it seems quite risky to argue that the developmental state is declining based on the political chaos during the early democratic transition.

### **Developmental States in Democratic Regimes: Deliberation and Accountability**

The democratic transition would inevitably pose challenges on current developmental states, since new interest and actors had emerged within the political system. Without sophisticated guidance, this transition could weaken the state's capacity to develop. In fact, democratic transition in some countries was proven detrimental to social-economic development because the winners of the election rule the states without constitutional checks, accountability, or respect for the rights of

their people<sup>71</sup>.

In order to accommodate possible conflicts between a democratic system and the state's commitment to develop, White particularly argued that certain institutional design was necessary to prevent the partisan/social contestation from hindering social development. He believed a more deliberative form of government, which incorporates different parties, business organizations and civil groups, may contribute to a better democratic developmental state<sup>72</sup>. Evans also mentioned that, while the Western economic model has diffused globally, the monocropping of Anglo-American liberalism model would not succeed in transcending national boundaries. There has been discretion of institutional design on the monocropping of American's liberal model. In local practices, public discussion and opinion exchange would be at the heart of deliberative development. The participation of civil sectors is essential in this trajectory.<sup>73</sup>

While Evans emphasized that capacity expanding was the top priority for states to develop, he believed that, by quoting Sen, public deliberation was imperative to developmental goals. Since deliberation was both means and ends in reaching

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<sup>71</sup> Zakaria, F. (2003). *The Future of Freedom: Illiberal Democracy at Home and Abroad*. New York: Norton, and Levitsky, S. & Way, L. (2002). "The Rise of Competitive Authoritarianism," *Journal of Democracy*, 13, 51-65.

<sup>72</sup> Gordon White and Mark Robinson (1998), *The Democratic Developmental State: Politics and Institutional Design*, New York: Oxford University.

<sup>73</sup> Evans, Peter (2004), "Development as Institutional Change: The Pitfalls of Monocropping and the Potentials of Deliberation," *Studies in Comparative International Development*, Winter 2004, Vol. 38, No. 4, pp. 30-52.

developmental goals, treating the citizenry as passive recipients would very likely produce sub-optimal or even counter-productive results. Without multiple sources of information and opportunities for public deliberation, state agencies in the end would very likely make inefficient investment.<sup>74</sup>

For new democracies, deliberation is particularly important because these countries can easily fall into the danger of political chaos and instability. Through inclusiveness of various sectors, the legitimacy of the various values can be mutually identified, and public preferences can be arrayed<sup>75</sup>. To some extent these functions of deliberation were extremely crucial for non-Western countries, since Western mature democracies have developed mechanisms endogenous to deliberation that can structure interaction and prevented the state from reverting to arbitrariness and civil conflicts<sup>76</sup>. In addition, the accountability, as an institutional capacity within the public sector, also attributes to the state's performance in developmental agendas, for the state needs to respond to a broad array of civil pressures for development. Therefore, a more delicate dimension of democracy, through increasing public deliberation and accountability, had incurably emerged as the core of state's developmental plans.

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<sup>74</sup> Evans, Peter (2004) Ibid.

<sup>75</sup> Dryzek, J. S. & Niemeyer, S. (2006). "Reconciling Pluralism and Consensus as Political Ideals," *American Journal of Political Science*, 50, 634-49.

<sup>76</sup> Dryzek, J. S. & List, C. (2003). "Social Choice Theory and Deliberative Democracy: A Reconciliation". *British Journal of Political Science*, 33, 1-28.

Therefore, changes of the **concept of development** ought to shed lights to the **concept of developmental states**, since development was no more a unitary pattern. However, in terms of research on Taiwan's developmental state, the previous "state-centric" view on developmental states still be widely adopted.<sup>77</sup> This failure in capturing the contribution of social actors led to a straightforward conclusion that the developmental state under a democratic regime in Taiwan was "declining" because more interests were included in the policy-making process.

Particularly on this matter, Chen Shangmao emphasized the significance of democratic features in the research of developmental states. In order to evaluate the levels of "contending office" and "civil participation," he thus added two parameters "accountability" and "transparency" while examining the capacity of Taiwan's developmental state. By adding both indicators, Chen had a different interpretation on the DPP's performance after Taiwan's democratic transition. His works particularly pointed out that the DPP's policies, though seemed chaotic, were in fact strengthening the "accountability" of the state.<sup>78</sup> The DPP's contribution to the depth enhancement of the developmental state was often overlooked if "accountability" was left aside.

Some may question that accountability could conflict with the state autonomy,

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<sup>77</sup> For example, Wu Yushan used four indicators to evaluate the capacity of Taiwan State: (1) state autonomy from the society, (2) elite consensus on the developmentalism, (3) state's penetrative capacity, (4) world market-conforming industrial policy. None of these above refers the state's capacity to include various interests into the process.

<sup>78</sup> Chen Shangmao, (2007) "The Politics of Taiwan's Financial Reform: ACTA Model", *Dong Wu Zheng Zhi Xue Bao (Political Journal of Suzho University)*, Vol 25, 1: pp 115-160.



since an accountable state will have to receive institutional restraints. The author proposes that while autonomy refers to the state's capacity to counter "special interests from distributive coalitions," accountability refers to the state's capacity in fulfilling the demands of "encompassing coalitions" by responding to policy stakeholder, civil groups, and supervising institutions. Therefore, a state *can be* autonomous as well as accountable at the same time. Furthermore, a state under better institutional monitoring can also lead to the enhancement of state's autonomy. The state could use monitoring mechanism to avoid possible rent-seeking behaviors from the rent-seeking sectors, for the state officials may claim that their decision-making power was limited by monitoring mechanisms. This "limited power" would grant the states more bargaining chips in the negotiations with special interests.

Following this perspective, **this dissertation will adopt deliberation and accountability as additional indicators, combined with the state's autonomy, penetrative power, and economic rationality, in reviewing the evolution of the developmental state in Taiwan.**

### **The Model**

Since expanding and building capacity in providing more human services is often the current goal of developmental states, these democratic elements are crucial in this capacity-building process. Based on traditional wisdom on state's autonomy,

penetrating power, and economic rationality, a new model including deliberation and accountability will be formulated.

#### **A. Autonomy: Ability to Resist and Co-opt**

Autonomy has been the core of the developmental state notion. The state's autonomy refers to the extent to which the state can act independently as external forces, both domestic and international, and co-opt those that would alter or constrain its action.

As the author mentioned, absolute autonomy of a state is neither reasonable nor possible even in an authoritarian regime. The states have a wide array of social ties with different groups, and it would be unlikely for the states to neglect them. The key element of the autonomy is thus whether the states can resist "rent-seeking special interests from corporations," and whether the state officials can co-opt those special interests in accordance with the state's long-term rationality. The discrepancy between corporations' demands and the state's policies may serve as an important parameter.

Theoretically, the biggest challenge against the state's autonomy in democratic regimes may be "elections." The need of being re-elected would drive politicians to introduce short-term political concerns into policies. Therefore, the consistency of policies during different terms of administrations may also seem a useful indicator to examine the state's autonomy from rent-seeking behaviors. A relatively consistent

policy does not automatically make it an autonomous policy. However, it does illustrate the possibility that the policy may survive short-term political interventions, since policy networks in different administrations may be quite distinct.

### **B. Penetrative Power**

The state's penetrative capacity refers to the ability of the state to implement the policies. A strong state would have a better capacity in carrying out formulated policies, no matter in the authoritarian or democratic forms. This criterion includes the penetration into different levels of government agencies, social groups and even corporations.

### **C. Economic Rationality**

This refers to the state's ability to gather and evaluate information relevant to their interests and to make decisions maximizing the utility. Wu Yushan used "world market-conforming industrial policies" as the indicator. However, this may be a problematic parameter. This market-oriented parameter seems not significant enough in truly evaluating state capacity and efficiency in comprehensive national planning. Put it more clearly, the state's developmental strategies can be dynamic. It may decide to transfer its resources into a different area given the change of social or economic conditions within the country at the moment. Schneider, however, adopted a more inclusive view. He believed that a successful/effective industrial policy had to

“remove major supply and demand bottlenecks, integrate the economy forward and backward, internalize within the domestic economy a particular technology cycle, serve as a motor to regional development, open new markets and supplies, or have significant externalities that contribute to industrialization.<sup>79</sup>” This dissertation will employ this view to examine the policy rationalities behind the decision-making process.

In order to integrate different dimensions of development, this dissertation also intends to explore whether the policies can create other social well-beings by offering human capital such as social equity.

#### **D. Deliberation**

The deliberative approach was originated from Habermas. He believed that political deliberation was not restricted to political elites, and that both public and private spheres played a part in the political process.<sup>80</sup> Habermas’s notion was further extended by Hendriks and Parkinson, who proved that deliberation in more formal institutional settings can be linked to informal public spheres, with delicately designed forums consisting of public and private actors, and thus can generate legitimacy in relevant public policies.<sup>81</sup>

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<sup>79</sup> Schneider B.R., (1991). *Politics within the State: Elite Bureaucrats and Industrial Policy in Brasil*, University of Pittsburgh, Pittsburgh PA, page 67

<sup>80</sup> Habermas, Jurgen, (2000) *The Inclusion of the Other*, Cambridge: MIT Press.

<sup>81</sup> Hendriks, C. (2006). “Integrated Deliberation: Reconciling Civil Society’s Dual Roles in Deliberative Democracy”. *Political Studies*, 54, 486-508; Parkinson, J. (2006). “Deliberating in the Real World: Problems of Legitimacy” in *Deliberative Democracy*. Oxford: Oxford University Press.

Reciprocal communication is the key element of deliberation. In participating in deliberation, individuals reflect upon their preferences, and should be open to preference change. However, communication itself does not automatically lead to deliberative policy. The governments need to build structures to cultivate this institutional arrangement. To better evaluate the deliberative capacity in political systems, Marian points out the following features.<sup>82</sup>

**Inclusiveness:** it refers to capacity of including every citizen in the policy process. Inclusiveness applies to the range of interests and discourses present in a political setting. It also includes state's capacity of enabling communication between different social groups. Through the inclusion of all social actors, the participants are capable of identifying disparities and dissents.

**Scrutiny:** it means that non-experts are allowed to question and challenge conventional sources and holders of knowledge and expertise. It would help ensure a greater public accountability and empower citizens with more leverage of decision-making.

**Developing Skills and Understanding:** this criterion is to evaluate whether the participants learn from participating into the policy-making process. Time is distributed to all participants for discussing and comprehending the subject in

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<sup>82</sup> Barnes Marian. (1999), *Building a Deliberative Democracy: An Evaluation of Two Citizens' Juries*, London: Institute for Public Policy Research.

question.

**Creating Differences:** by including people previously excluded from the decision-making process, it would create a difference on the decision. This criterion is to explore if that is the case in the decision-making process.

### **E. Accountability**

The basic concept of accountability is “who should be responsible to whom for what?” The author suggests that *the state* should be responsible to **policy participants, policy stakeholders, and monitoring institutions for decisions it makes**. According to Schedler and Diamond, it includes two elements: “answerability” and “enforcement.”<sup>83</sup> Answerability refers to the obligation of the government to provide information about their decisions and actions, because citizens need transparent and timely information to identify political and legal responsibilities of the government. It is fundamental to democratic governance. As Przeworski described in *Sustainable Democracy*: “Governments are accountable only when voters can clearly assign the responsibility for performance to competing teams of politicians, when the incumbents can be effectively punished for inadequate performance in office, and when voters are sufficiently well informed to accurately assess this performance.”<sup>84</sup>

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<sup>83</sup> Larry Diamond, Marc F. Plattner, and Andreas Schedler (1999), *The Self-Restraining State: Power and Accountability in New Democracies*, CO: Boulders. Chapter 1.

<sup>84</sup> Przeworski, Adam (1995), *Sustainable Democracy*, Cambridge: Cambridge University Press, 1995,

Enforcement suggests that the public or monitoring institutions are capable of sanctioning or punishing the offending party or fixing the contravening behavior. Schelder also examines two types of accountability: horizontal accountability and vertical accountability.<sup>85</sup> “Horizontal accountability” refers to the capacity of state institutions (including the monitoring judicial system) to be checked by other public agencies and branches of the government; “vertical accountability” indicates the channels that the state offers through which citizens, mass media and civil society can apply their criteria examining and responding to agendas that the state makes.

Therefore, accountability does not only illustrate a series of horizontal institutional arrangements, it also requires a direct and transparent report system to the public. In this dissertation, the author puts emphasis on whether the performance of The Executive Yuan and the MOEA staff can be checked by other *policy participants*—such as citizens and experts attending public hearings, *policy stakeholders*—such as farmers whose land is polluted due to the industrial policy, and *monitoring institutions*—such as the EIA, the APC and the judicial system.

### **Methods and Case Selection**

In this dissertation, the author would focus on the above five parameters to reassess the impact of democratization on the “developmental state” in Taiwan during

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p. 108.

<sup>85</sup> Larry Diamond, Marc F. Plattner, and Andreas Schedler (1999), *Ibid.* Chapter 2.

2004 to 2010. To be able to better measure the adaptation of Taiwan's economic bureaucracy in formulating policies, the author chose three major industrial projects, all of which were greatly promoted by Taiwan's economic department, to evaluate the state's performance in the policy process. During 2004-2010, the Ministry of Economic Affairs (MOEA) pushed three capital-intensive projects, and these three projects all encountered challenges from the emerging environmental governance fostered by massive public participation. Because of the new mechanisms, the previous decision-making pattern of developmental state had to adapt in respond to the new trends.

**Table 2.1 List of the Cases**

<b>Cases</b>	<b>Time Frames</b>	<b>Developers</b>
Formosa Steel-making Plant	2005-2009	Formosa Corporation
CTSP's second expansion (Holi-Chixing)	2006-2011	AU Corporation
CTSP's third expansion (Erlin)	2008-2011	AU Corporation
Guoguang Petrochemical Plant (ENP)	2006-2011	Guoguang Petrochemical (semi-SOE)

The rationales of choosing these case were based on the following reasons: First, these industrial projects were considered the three biggest projects after the democratization in 2000. The MOEA had listed them as the major investments and top priority in state's developing agendas. To be able to smoothly start these projects, the MOEA exerted different means such as tax subsidy and land acquisition to



facilitate the process. The MOEA even imposed limitation of capital flows on those corporations in order to ensure the final outcome. The state's strong operation on those industrial projects were the first typical character of developmental states. These three projects revealed the complicated web weaved by the MOEA in sustaining economic growth.

Second, these three projects represented three major industrial sectors in Taiwan. The steel and petrochemical industries were both key sectors promoted by Taiwan state during 1980s, and the MOEA had well-established expertise on both industries. The LCD sector in Taiwan was the star sector initiated after the political democratization, and was the top leader in global LCD industry. These projects were either having a significant role in the industrial chain to bring snowball effect on economical growth (steel and petrochemical sectors) or creating considerable profits in the global markets (LCD). In these grand-size industrial investments, the MOEA focused on stimulating industrial production in exportation and tried to create markets for those new productions. All of these three projects shared both export-oriented and capital-intensive features, which were the typical pattern of East Asian developmental states.

Third, these projects all aroused huge controversies since both energy efficiency and capital efficiency of these projects were widely questioned by environmental

groups and academic institutions while reviewed by the EIA committee and the Area Planning Committee (APC). Both agencies not only signify the inclusion of alternative perspective of “development,” but also characterize as “checking and monitoring mechanisms” because their approval of these construction projects and associated industrial policies is required before conducting the developing behaviors. Since these mechanisms were equipped with opportunities of public monitoring, these institutions make public deliberation possible within the institutions. By offering both vertical and horizontal checking and monitoring, these institutions appeared a very reliable test on the accountability of the state after democratic transition. This is hence a strong test on the ability of the new state to mediate various emerging developing agendas and to generate effective policies on national development.

Fourth, the author chose to focus on the projects, instead of policies, because projects appeared to be better research targets than industrial policies per say in Taiwan’s case. On the one hand, the according to Taiwan’s practices within the EIA before 2010, the reviewed units in both the EIA and the Area Planning Committee (APC) were specific investments, not the policies. The EIA review on the policy scope did not occur until those projects encountered problems in the review system. In other words, it was the review on the projects at the first place drove more comprehensive retrospection on the policies. On the other hand, the MOEA’s policies

targeting on these sectors appeared to be very capital-driven. The policies were quite tentative and very much dependent on the final outcome of these projects. Therefore, in the completely decision-making process, the “projects” were the primary issue areas of the debates rather than policies.

Fifth, in order to elude the DPP’s “novice factor” and neutralize the partisan difference in these projects, the author chooses cases starting from the late DPP administration (2005) to early KMT administration (2010). This design would elude the impact of “weak administration”. In all three cases, the state’s promotion was operated with continuity, despite of slight partisan differences. Therefore, the research would show the change in state’s decision-making pattern in a long-term scale.

The analysis of the case of Formosa Steel Factory in Yunlin is in Chapter Three. The fourth chapter focuses on Central Taiwan Science Park in Holi-Chixing and Erlin, and the construction of the ENP in Zhanghua is in Chapter Five.

In this dissertation, the author will observe the formal and informal channels in which the government officials (in different levels and agencies) and stakeholders interact. The meetings in the EIA (Environmental Impact Assessment) committee, the APC, and the Executive Yuan, both at the central and local level, would be the primary foci. The informal interactions between state officials, local politicians and private sectors during the policy-making process would also be examined.

Table 2.2 **Indicators**

Parameters	Indicators
Autonomy	<ul style="list-style-type: none"> <li>- Did the government agencies and politicians intend to resist special interests?</li> <li>- Did the government co-opt the corporations or negotiate with corporations to serve the state's need?</li> </ul>
Penetrative Power	<ul style="list-style-type: none"> <li>- Was the government efficient in carrying out the policies and the following monitoring?</li> <li>- Did the different government agencies follow the same doctrine?</li> </ul>
Economic Rationality	<ul style="list-style-type: none"> <li>- Did the MOEA carefully evaluate the efficiency, innovations or both positive and negative externalities on the state's economic agendas?</li> <li>- Did the government agencies include different developing agendas and possibilities in the decision-making system?</li> </ul>
Deliberation	<ul style="list-style-type: none"> <li>- Were different voices included in the policy institutions?</li> <li>- Did meaningful information exchange and mutual respect take place during the discussion?</li> </ul>
Accountability	<ul style="list-style-type: none"> <li>- Did the government release accurate and timely information to the public?</li> <li>- Did the state respond to opinions from vertical and horizontal agencies?</li> <li>- Were policy-makers sanctioned for their unaccountable behaviors if there were any?</li> </ul>

### **Research Methods**

Given the characteristics of the listed cases, the author intends to apply the following methods to conduct this research.

#### **1. Interviews**

The author would conduct interviews with *the officials in the governmental branches taking charging with national economic development (for example, the MOEA and the National Science Council), the members in the government's checking branches (for example: the EIA and the APC), the stakeholders (corporations, local*

*communities and environmental groups), local politicians, legislative representatives, and journalists who have participated into the policy process.*

While conducting the interviews, there are different tactics that one can employ in terms of the research method. **Surveys, key informant questionnaires, community forums and focus group interviews** are among the most widely used approaches. Among them, the survey approach does not serve well in this research, because the purpose of this research is not exploring public attitudes. Besides, the participants in the decision-making process and activism are relatively small groups with limited and specific networks. Therefore, the survey method appears to be inadequate for this research. In this research, person-to-person interviews and focus groups interaction will be adopted to complete this research.

Due to politically sensitivity, in order to prevent pressure from peers and the public, the author will conduct **interviews in depth with key informants**, including government officials from the EPA, the CEPD, the MOEA, the EIA committee members, SOEs, environmental groups, and local action leaders, for they can provide insightful information directly correlated with the policy process. The interviewees will be asked to give detailed descriptions of the policy process and to defend their propositions in an approximately two-hour interview. To prevent bias, the author will interview people with different backgrounds and opinions toward these industrial

projects to verify the facts.

Techniques including cross-examination and fact tracing will serve as complementary measures to verify the interviewees' statements. While perspective discrepancies among different agencies and institutions are highly likely to occur, an impartial interview appears to be a more reliable and feasible method to understand the inside dynamics of these cases.

**The focus group** approach will also be adopted when the author visits local communities, NGO meetings, where the information is more fragmented. This approach may stimulate the diverse interaction and help the researcher to conceptualize a more complex yet comprehensive picture. The reason that the author will adopt the focus group method rather than the community forum method is that the former provides a more optimal size to gather important information. It is also relatively inefficient in holding a community forum in order to explore the history of certain campaigns. For most interviews with social group members and journalists, the author intends to use the opportunity of NGO meetings; public hearings and EIA review seminars to form these focus groups, for these interviewees were more open to engage their opinions with different camps.

## **2. Content/Document analysis**

The author will also collect government documents (in the EIA and the APC

meetings) and relevant announcements from government officials. These reports or announcements would then be analyzed based on the rationale behind them, the attitudes of the decision-makers, the actions of the government agents, and social impacts they aroused.

Through this research, the author intends to propose that Taiwan's developmental state after democratic transition still exists, but in a very different appearance. Under the new lens adopting new parameters, the performance of both the DPP and KMT administrations can be evaluated in a more discreet manner.

## **Chapter 3 Formosa Steel-making Plant**

### **Introduction**

The Taiwan's steel industry was developed during the 1970s. After the establishment of China Steel Company in the 1970s, Taiwan was basically self-sufficient on steel supply. Through a series of expansion, Taiwan's steel industry reached its peak in the 1980s. After the 1990s, a decline occurred on domestic demands for steel products resulted from the migration of major downstream industrial sectors to China. In the effort to manage the over-production of steel products, most of the steel companies in Taiwan sought exportation increase as the solution. This harsh competition in this sector, to the disadvantage of some medium-sized companies, led to forced withdrawal from the market during the period from 2000 to 2003.

From 2004, the Formosa Group announced a construction plan for a huge-size steel-making plant in Yunlin County with the investment estimated up to 4.3 billion USD. Owing to the needs in stimulating Taiwan's economy, the Ministry of Economy Affairs (MOEA afterwards) approved this colossal plan and listed the FSP as a major investment in Taiwan. Both the DPP and KMT administrations considered this investment an important parameter in economic growth, although the DPP had a long



history of criticizing the Formosa's environmental performance before.<sup>86</sup>

However, the plan's cost-effectiveness was extensively questioned due to its capital-intensive, energy-intensive and high-polluting features. Not only did it elicit an environmental dispute at the local level, but it also triggered a widespread suspicion on the benefits of increasing domestic steel productivity. In the EIA reviews during 2005-2008, there had been great challenges against this project, and one of which was from Chang Guolong, the EPA director during 2005-2007. As a well-known anti-nuclear activist, Chang's "hardcore" background rendered him repellent to this project. Another great challenge arose from the local level. The county head in Yunlin, Su Zhifen, expressed refusal toward this polluting facility and exhibited reluctance in granting approval of the construction license unless "compensation fund" was provided by the Formosa Group to the local county.

Facing these harsh obstacles, the state still attempted to implement this plan despite that the economic efficiency remained opaque. The DPP administration continued employing pressure on the EPA, and the President Chen also urged the EIA to have the FSP plan approved in his term. The collision soon ignited conflicts within the EIA committee and the DPP cabinet.

With the impediment from the EIA and local resistance, the Formosa Group

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<sup>86</sup> Even the KMT administration declared the FSP case as the "major private investment" for the year 2008, because the FSP consisted of 10% of total annual investment in Taiwan.

eventually froze this project in 2008, for the uncertainty on setting up the FSP in Taiwan had been elevated. The MOEA and some politicians started to blame the EIA as an “obstacle for investment” and believed that this monitoring system would eventually drive away domestic capital. As a previous developmental state, the capacity of Taiwan state in this event was worth-noticing, for it highlighted a transformation of developmental state in adjusting to state’s accountability in a democratic regime.

### **State Autonomy in the FSP Decision-making Process**

During 2004-2008, the FSP project had been one of the controversial cases in the administration. Throughout the process, the goals of the Taiwanese government in this industry were relatively unclear, since there was little imminent needs in expanding steel productivity in recent decade. Furthermore, the state had been following Formosa’s steps and to some extent was fooled by this industrial giant. Although the founder of Formosa did reveal his strong intention to build the FSP in Taiwan, some believed that the FSP plan in Yunlin was a decoy to delay another industrial project from Formosa’s competitor, Guoguang Petrochemical Company (GP).<sup>87</sup> While Formosa had been one of the top providers of petrochemical products in Taiwan, the group was unwilling to see their primary competitor catch up. This

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<sup>87</sup> See *Business Today*, Volume 599, June 11<sup>th</sup>, 2008

preemptive action from Formosa might successfully crowd out their competitor from Yunlin by depriving GP's planned site for future facilities.

Furthermore, the Formosa also delivered a series of strict terms to the state in ensuring that the FSP project would receive the least monitoring from both the EIA reviews and the land purchase deal. Since the MOEA officials were inclined to generate better economic stats on the GDP, the state was soon attracted by this enormous investment. The MOEA that was under the DPP administration therefore decided to promote this expansive policy without carefully verifying the efficiency of steel plant. The state's autonomy was thus challenged by this corporation with rich political connections and bargaining power.

### **The Land Struggles between the Two Corporations (Formosa and GP)**

There had been a heavy competition between the Formosa Group and the GP in the petrochemical industries. According to the MOEA's initial design in 2004, the government would provide the south side of Huwei riverbank, located in Hsinhsing zone in Yunlin, to the GP for the Eighth Naphtha-cracking Plant (ENP plan afterwards). The government thus authorized preliminary construction in this area for the purpose of transferring this slot to the GP in the future. However, acknowledging the GP's ENP plan might create new competition between these two petrochemical corporations, the Formosa Group decided to take a preemptive action by showing

their enthusiasm in establishing their steeling-making facility (FSP) in this area. In order to assist the Formosa, the MOEA thus changed the original plans and preserved a better spot in Yunlin's industrial complex for Formosa Group's FSP plan. This policy change forced GP's ENP plan to move to a less convenient spot lacking of sea ports, and this decision undoubtedly annoyed the GP.

Also, the fact that both corporations may share this slot would result in great troubles in the EIA reviews, since the concentration of two high-polluting facilities in the same site may arouse the EIA committee's concerns on local environmental carrying capacity. Because "blocking the ENP plan" was part of the reasons that the Formosa Group delivered the FSP plan in this slot, the Formosa was willing to wait in the EIA procedure before the GP made any moves. In contrast to the Formosa's lingering attitudes, the GP was not willing to bear the cost of endless waiting and finally decided to move the whole plan to Dacheng, Zhanghua in 2008.

The interesting fact was that this was not the first time that the ENP was banished by the FSP plan. In 2003, the GP originally chose Yunlin as the designated site, though they concluded that Dacheng, Zhanghua would be a better place. They made this decision mainly because they recognized the fact that the MOEA may hand over Dacheng industrial complex to the Formosa's FSP plan. To avoid confrontation, the GP thus decided to concentrate on Yunlin in cultivating the ENP plan after 2004.

Unfortunately, the FSP project eventually joined the battle in Yunlin and drove the ENP plan away even though the GP had tried to avoid direct conflicts. In fact, this was not a single event. According to Lu, during previous battles between the CP and the Formosa, the CP had been always asked by the MOEA to concede to the Formosa Group on site selection.<sup>88</sup>

In 2010, the staff in the Formosa again admitted that it was the expansion of the Sixth Naphtha-cracking plant (SNP afterwards), not the FSP, served as the original purpose for the Formosa to seize this industrial slot<sup>89</sup>. The FSP plan in Yunlin was rather a smoke bomb. The MOEA staffs were aware of Formosa's intension, yet it appeared too confident to have both the FSP and ENP plans start at the same time. As a matter of economic significance, the MOEA director asserted that the GP's ENP plan would be much more significant than the Formosa's FSP plan, in terms of the economic utilities created in Taiwan's industrial chain.<sup>90</sup> Nonetheless, the MOEA did not render higher priority to the ENP plan. Furthermore, the emission quota of VOCs in local area was granted only to the FSP plan; the GP did not get any piece of this emission pie.<sup>91</sup> Why did the Formosa Group, as a private firm, constantly benefit from the government when competing with a semi-SOE? This was highly associated

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<sup>88</sup> Lu, Jirong, (2007) Local Factions, Social Activism, and Environmental Governance, Master Thesis, Taiwan Taipei: National Chengchi University. Chapter 2

<sup>89</sup> Apple Daily, June 11, 2010.

[http://tw.nextmedia.com/applenews/article/art\\_id/32577690/IssueID/20100611](http://tw.nextmedia.com/applenews/article/art_id/32577690/IssueID/20100611)

<sup>90</sup> Epoch Times, May 11, 2008. <http://www.epochtimes.com/b5/8/5/11/n2113354.htm>

<sup>91</sup> UDN News, February 24, 2009.

with Formosa's capacity to transfer their capitals oversea and to penetrate local politics.

First, the investment plans of GP, as a semi-SOE, were controlled by the Taiwanese government. It was not necessary for the government spending extra resources to regulate this state-owned capital, since it would follow the state's order anyway.<sup>92</sup> However, in terms of the Formosa, the state may need "carrots" to tame this industrial giant because of the high mobility of the Formosa's private capital.

For example, the Formosa Group once attempted to conduct a "Haicung Plan" in China in 1989. The Taiwan's KMT administration considered that it would bring severe damages on Taiwan politically and economically. On the one hand, the Premier Hao threatened to terminate most financial support from Taiwanese banks to the Formosa Group; on the other hand, the state also promised to give the Formosa more favorable terms such as granting the licenses of power generators to this private company. By those efforts, the Formosa Group eventually relinquished Haicung plan and set up the SNP in Yunlin instead. In other words, toward domesticate private firms, the Taiwan government adopted "stick and carrot" strategy to prevent the major corporations from migrating. In the FSP case, it was the GP to be sacrificed.

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<sup>92</sup> Lu's research indicated the reason that the MOEA kept chose the Formosa Group over the CP in term of site selection was that CP, as a SOE, did not have an investment branch. In 2006, the CP decided to invite six medium-size private firms to form the GP. After the GP was formed, the government can no longer ignore the demand from China Petroleum, because major players in petrochemical industry were included in the team. If the government does not take the ENP plan seriously, the private shareholders would exert more pressures on the government. Lu, *Ibid*, page 77.

Second, the Formosa Group possessed geographic advantage on efficacy in Yunlin. Since the Formosa had established a petrochemical empire in Yunlin, it would be more efficient to grant higher priority to the FSP plan in Yunlin. Also, the Formosa's long-lasting social connections with local politicians may render the company much more success to overcome local barriers such as environmental grievances. With stronger social-economic foundation, it was much easier for Formosa Group to penetrate into local county office and acquire construction licenses.

However, after chasing away the GP's ENP plan, Formosa's preparation of steel-making facility suddenly stopped. The Formosa began to refusing sending updated schedules on the FSP plan. While successfully weakening their opponents by taking the site in Yunlin in the first round, the Formosa intended to keep the site under ambiguity longer in order to remain flexible on future choices. Possessing the rights to develop this land also provided another opportunity for the expansion of Formosa's main petrochemical facilities in Yunlin. This future expansion was referred to as the Forth Expansion of the SNP.

Since this site was originally prepared for energy-intensive industries, there was a high threshold on the application for usage for this site. As a matter of fact, the land is

still left unused unto this day (2011).<sup>93</sup> In February 2009, the MOEA threatened to release this industrial site to public auction in order to push the Formosa Group to take positive actions on investment in Yunlin. There were two folds of rationales behind this decision. First, it was to force the Formosa Group to realize the investment they promised to the Taiwan state. Second, the MOEA also asked the Formosa to be responsible for the government's huge spending on land purchasing and the early development of this site. If the FSP cannot be realized, MOEA perceived that its best plan was to sell this land to the Formosa at an amount of ten billion NT dollars. The MOEA claimed that if the Formosa Group complied with the government's requests, the government could offer some benefits in return, such as transferring the emission quota of water usage and VOCs emission to the future expansion of the SNP.<sup>94</sup>

In June 2009, the Formosa Group officially turned down this offer. The first reason was because their competitor, the GP, has transferred their ENP plan to Zhanghua county; it would be less necessary for the Formosa to acquire this site soon. Second, the Formosa was waiting for the optimum timing to determine on whether to save the slot for the expansion of SNP or the FSP plan, especially when Taiwan and China were about to sign the Economic and Cooperative Frameworks Agreement

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<sup>93</sup> Liberty Times, August 08, 2010.

<sup>94</sup> UDN News, Feb 24, 2009.



(ECFA afterwards) in 2010. This agreement would drastically alternate the strategy of Taiwan's petrochemical industry in establishing new facilities in Taiwan.

In fact, the Formosa could afford the expenditure on land purchase, but the primary reason that the Formosa refused to comply with the government was because the state could not guarantee to prevent EIA's monitoring on this project. The Formosa Group claimed that "it was the government's duty to help the private sectors, not vice versa." The CEO of the Formosa Group thus stated:

*"Even if the Formosa Group purchased this land, the government still could not guarantee the approval of future EIA review. It is very awkward to ask private firms to purchase lands while nothing can be guaranteed."<sup>95</sup> (Quoted from the Formosa's CEO)*

Having said so, in order to avoid direct conflicts against Taiwan state, the Formosa Group decided to initiate some small projects in planned industrial site to alleviate pressures from the government. In May 2010, they submitted a new application on the facilities producing polycrystalline silicon and silane (SiH<sub>4</sub>) on this site. Since these facilities did not require EIA reviews due to their small sizes, the construction could start any time once the MOEA approved them. Nevertheless, the MOEA would not allow the Formosa Group to get away so easily. The MOEA

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<sup>95</sup> UDN News, Feb 24, 2009.

rejected this initiation with the view that “this new application would interfere with forthcoming land auctions since it would decrease the quota for air and water pollution<sup>96</sup>”. The MOEA attempted to compel the Formosa to generate an equally important investment since this corporation had chased away the ENP plan from Yunlin. If the FSP could not be implemented, the state would demand another capital-intensive plan from the Formosa to balance the damage.

The facts above suggested that the Taiwan state, given its previous legacy of strong developmental state, still intended to control the private sectors, but began to lose bargaining power in the negotiation after the withdrawal of the ENP plan. Among the factors weakening state’s bargaining power, the state’s failure to adjust to the monitoring mechanisms turned out to be significant.

### **The Tight Politician-Corporation Relation in the FSP Case**

In the FSP case, the shadow of the political-corporation relation was revealed in the policy-making process. The founder of the Formosa Group, Wang Yongching, who was one of the wealthiest businessmen in Taiwan, considered this project one of his personal dreams. As a long-term political patron to President Chen, he had been a significant figure in both business and political circle.<sup>97</sup> The following example serves as an appropriate illustration of the influence of Wang and the Formosa Group

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<sup>96</sup> Economic Daily, May 7, 2010.

<sup>97</sup> In addition, the Formosa Group had been a great donor to major politicians in the DPP administration. Some even called themselves as “Legislators of the Formosa Group” in the Legislative Yuan.<http://www.coolloud.org.tw/node/10996>

on the politicians.

In July 2005, Wang's brother arranged a personal meeting with President Chen and proposed seven terms on the FSP case before the President. These terms requested the government to grant a special status to the FSP case for reducing all possible costs in facilitating the FSP.<sup>98</sup>

**Table 3.1 the Terms Delivered by the Formosa on the FSP plan**

1."Buy after Rent" on the land of designated industrial site
2.CO2 emission from the FSP plan not monitored at new environmental standard
3.Shortening the EIA review process
4.Tax benefit included
5.Compensation mechanized formulated by the government, if acceptable
6.Acquiring the site as soon as possible
7.Government taking the lead in the development of adjacent towns

Source: Economic Times, July 14, 2005.

Among those terms, the top three demands posted serious threats upon state's autonomy. First, the MOEA's ideal price to sell this land to the Formosa was ten billion NT dollars. However, the Formosa proposed to acquire this land by a "buy after rent" method, and was only willing to purchase the land at 7.7 billion NTD. In fact, the expense for preliminary land development on a 283-acred land had already cost the government six billion NTD<sup>99</sup>; however, the designated area of FSP plan was 630 acres, roughly two and a half times bigger. This suggested that Formosa's offer

<sup>98</sup> Commercial Times, July 14, 2005.

<sup>99</sup> Economic Daily, October 27, 2005.

could barely cover the cost for the land development. Thus, this term was exactly requesting the government to undersell state's properties to private firms.

Second, because the EPA director, Chang, planned to include the threshold of CO<sub>2</sub> emission into the EIA review on the FSP case, Wang directly asked for elusion of this parameter from the EIA review. In addition, he also requested for avoidance of full EIA review on the FSP plan. Wang claimed that, given the fact that the FSP would be located next to the SNP; the brand new EIA review could be omitted. According to the Formosa's suggestion, the FSP could be considered an extension of the SNP, and the full EIA review could be waived if the Formosa submitted an analysis report on the difference brought by the design change. Both requests were direct interventions on the government's authority, since the EIA review was almost the only monitoring mechanism in economic decision-making. These unreasonable terms suggested that the Formosa intended to exercise their influence on politicians to seek for their private interests. This rent-seeking action was a test on the state's autonomy in maintaining state's authority.

In 2007, there was another event showing that the Formosa Group was capable of employing their powerful political connection on the EPA. In March 2007, environmental activists reported the Formosa's SNP in Yunlin for the company changed their design on water usage in the operation process. To be more precise, the

SNP violated its previous commitment made in the EIA review in 2005: the volume of water usage from the SNP plan should be no more than 25.7 tons per day and could not exceed the new standard formulated in 2007. However, the Formosa Group simply disregards this commitment. The Formosa's arbitrary action clearly violated the *EIA Act*, because according to this act, the Formosa Group had to send a preliminary report clarifying the difference of design changes before these changes can be made, but Formosa failed to do so. After a series of investigations, the EPA thus issued a seven million NTD fine (equal to 0.2 million USD) to the Formosa concerning their unlawful behaviors.

Already being troubled by the uncertainty in the EIA review on the FSP plan, Wang was fairly bothered by the EPA's decision. In order to fight against the EPA, he then invited President Chen to join a tour in the SNP to demonstrate their high-standard operation process. As an 89-year-old and sick man, Wang accompanied with Chen during the entire tour. By doing this, he conveyed a clear message to the government officials by showing off his political influence over the President.

During the tour, President Chen in particular praised Wang's determination in keeping the capital domestically by investing in Taiwan. The President soon publicly proposed that this investment (FSP) ought to pass the EIA reviews with certain technical conditions, for the government ought to consider both economy dimension

and the environmental dimension.<sup>100</sup> In addition, he also urged the government to “sweep out the impediment of investments,” and to search for “a balance between economy and environmental protection” after meeting with Wang. A tight connection such as the one between Chen and the Formosa certainly posed a challenge against the state’s autonomy.

In May 2007, the entire cabinet was re-organized. The EPA director, Chang, was forced to leave his position, partly because of his disappointment toward the close tie between the President and the Formosa.<sup>101</sup> Although Chang had been a prestigious environmental activist siding with the DPP for decades, the DPP by then began to perceive Chang’s leaving as helpful for the state could regain supports from business community, since business sector had been grumbling against the long EIA sessions during Chang’s term. Therefore, Wang’s meeting with President Chen was the last straw to crush Chang’s position as the EPA director.

Consequentially, the Executive Yuan soon voided the 7-million NTD fine on the SNP in July 2007 after Chang left the EPA.<sup>102</sup> The EPA even also revised the emission standard after this event to prevent the SNP from violating the *EIA Act* again.<sup>103</sup> The speaker of the Executive Yuan, Hsieh, even claimed that the administration should not adopt acute means against the SNP such as imposing heavy

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<sup>100</sup> Economic Daily, April 21st, 2007.

<sup>101</sup> It was based on an interview with a former EPA staff.

<sup>102</sup> PTS News, July 18 2007. please see <http://e-info.org.tw/node/24544>

<sup>103</sup> <http://e-info.org.tw/node/28944>

fine or suspending operation. Regarding such accommodating actions, all three opposition parties believed that it was President Chen making this decision behind the scene.<sup>104</sup> The connection between the DPP politicians and the corporations was therefore proved detrimental in weakening the state's monitoring industrial sectors.

### **Losing Autonomy?**

Although the Formosa Group remained active in manipulating politicians into protecting the corporation's interests, there was little sign suggesting that corporation dominated over the state. Rather, it was the politicians, MOEA bureaucrats, and the corporations found their common interests in realizing this project. It was the desire to "keep GDP grow", instead of the administrative pressures from hierarchical system, that drove the MOEA staff to support the FSP plan without immense needs on steel products. The bureaucrats found themselves obligated to promote those capital-intensive projects, since it was the previous pattern of Taiwan's developmental state to reach economic success. In the bargains within the EIA, the techno-bureaucracy from MOEA constantly took side with the Formosa while there was no direct pressure on them<sup>105</sup>. They were excessively occupied with rather the vision of quick economic growth brought by capital-intensive projects than the concerns on politics. During 2005-2008, the MOEA's attitude on the FSP plan had

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<sup>104</sup> Commercial Times, July 2007.

<sup>105</sup> Take the fine on the SNP for an example, it was the MOEA officials that came up with the suggestion of appeal and created the possibility to reallocate the water usage.

been very consistent, although different Premiers and Presidents had different positions on this project.

In fact, the Formosa Group did not have very strong motivation to realize this project in Taiwan anytime soon. The FSP plan might be Wang's personal fantasy, but the Formosa Group was more concerned with the overall efficiency of this project. A Formosa's staff once proved that the FSP project in Yunlin was primarily a tactical move against the GP and the Formosa would not launch the plan without favorable terms granted by the government.<sup>106</sup> Also, the Formosa had a back-up plan in Vietnam, and this oversea option made the Formosa less obsessed with the FSP plan in Taiwan. Despite the investor showed little interest in starting this plan in Taiwan, the bureaucrats were quite enthusiastic in carrying out the FSP plan. In order to keep the FSP in Taiwan, the MOEA officials were actively participating in pushing this case through the EIA review.

According to the description from the EIA committee members, the Formosa was not very anxious in realizing projects during 2005-2007. Sometimes the Formosa representative even initiatively delayed the review schedule, for there was no urgency to start the plan during an economic recession.<sup>107</sup> Nevertheless, the staff from the MOEA and the Council for Economy Planning and Development (CEPD) often

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<sup>106</sup> See *Business Today*(*Jin Zhou Kan*), Volume 599, June 11<sup>th</sup>, 2008.

<sup>107</sup> See *Commercial Times* (工商時報), April 5<sup>th</sup>, 2007.



defended for this project in the EIA reviews. To facilitate this case, the minister of MOEA, Chen Ruilong, and the chief of CEPA often negotiated with the EPA director in weekly cabinet meetings. Those economic bureaucrats convinced the Premier Su, who eventually intervened in the EIA procedure, to take more aggressive actions in dealing with the EIA committee. In other words, it was the politicians following the advices from techno-bureaucrats in the decision-making process on the FSP plan.

Also, in terms of the fine against the SNP, although President Chen's attitude did have some impacts, the role of techno-bureaucracy was proven even more significant. It was the Minister of the MOEA, personally visited the EPA director then successfully convinced the EPA officials to revise the standard of water usage.<sup>108</sup> Minister Chen claimed that the Formosa's water usage was not the EPA's decision to make. Instead, under a cap system, the SNP could disregard new standard if the MOEA was capable to find enough water to fit its new design.<sup>109</sup> He even encouraged the Formosa Group to appeal against this fine to settle the conflicts. The EIA committee members eventually accepted the principles that both "water rights" and "cap and trade" system were the solutions for the SNP's excessive water use. Also, due to the MOEA's extraordinary efforts, the EIA committee voided the fine

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<sup>108</sup> The MOEA proved that the government might be capable to provide enough water for the SNP since the development of another industrial park (Sihu) had been abandoned. Besides, Chen also urged the EPA to "assist the SNP to pass the EIA report regarding the new standard of water usage. UDN News, March 29, 2007.

<sup>109</sup> Commercial Times, March 29, 2007.

issued to the Formosa three months ago.<sup>110</sup>

Therefore, to a certain degree, the state remained autonomous. The bureaucrats in the MOEA and the CEPD actually chose to defend for both the FSP and the SNP without receiving direct political pressures. Those bureaucrats were proven capable of formulating strong political agendas; however, they were quite uncomfortable with the time cost brought by the monitoring mechanisms. This lacking of expertise in integrating external costs into industrial policies resulted in their decreasing bargaining power during the negotiations with the corporations.

### **State's Penetrative Power**

As a matter of fact, the Formosa Group was a corporation with controversy in environmental ethics and was often questioned by civil groups before the FSP project.<sup>111</sup> In 1990s, the Formosa's SNP has triggered a powerful anti-SNP activism in Taiwan's environmental history. Many environmental activists and the DPP politicians had expressed doubts against this company in terms of its dreadful environmental record. The local DPP politicians combined with environmental activists, both in Yilan and Yunlin, had a long history in challenging the Formosa

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<sup>110</sup> Commercial times, July 3, 2007. See <http://www.cooloud.org.tw/node/9229>

<sup>111</sup> The Formosa was involved with an illegal mercury-dumping scandal in Cambodia. In 1998, some Taiwanese activists worked with Cambodian residents to prove that Formosa Group was illegally trafficking and dumping mercury compounds in Cambodia. The image of the corporation was seriously damaged by this event. Under harsh international criticism, the Formosa Groups finally decided to ship the mercury waste back to Taiwan. Several years later, the mercury waste was abandoned again in Pingdong County in 2006. Both events indicated that this corporation had a very dreadful environmental record.

Group in the local level. During early 1990s, the SNP was originally to be sited in Yilan county, where the DPP has the absolute control of local county office for several decades. The county head and his DPP comrades decided to boycott this project to preserve the natural environment of Yilan. After five years, the SNP eventually settled down in Yunlin and induced a huge amount of environmental disputes in this poor county.

However, in order to realize the FSP project, the Formosa Group needed the permission of local county since the local county was in charge of issuing construction licenses. However, the central government could only exert very limited impacts on policy implementation at the local level.

### **Weak Penetration from the Central Government into the Yunlin County**

Given prior cooperation with local politicians on the SNP plan, the Formosa had developed a good relationship with local faction leaders in Yunlin. In 1990s, the SNP was repelled by several counties, and eventually changed the plan site to Yunlin in 1998. In order to reduce the opposition from Yunlin residents, the Formosa group announced that they would offer local fishermen and farmers compensation approximately in the total amount of 30 millions US dollars. This strategy contributed to the final success of the SNP's establishment in Yunlin.

Some scholars believed that the establishment of the SNP was highly associated

with local factional politics in Yunlin. Based on Tang's research, the distribution of the compensation was through channels set by local politicians and mafia groups, and these "dealers" take 70% of the compensation money.<sup>112</sup> This notion indicated the close connection of Yunlin local politicians and the Formosa Group. Because local politicians (and the mafia groups behind them) in Yunlin demanded contracting business to reproduce the faction financially, the corporation built a relatively stable foundation in this county by offering political and economical benefits to local factions.

After former county head Chang was arrested in 2004 because of corruption, the KMT lost the county head election to the DPP's Su Zhifen in 2005. Su's being elected broke the harmony between the Formosa and local factions. When Su terminated the fifty-year rule of KMT polity in Yunlin, the Formosa started to encounter the challenge from this female local county head. She believed that Yunlin county has been seriously contaminated by the Formosa's SNP plan and suggested that the pollutions from the Formosa should be responsible for worsening public health records in Yunlin. Due to public health concerns, she strongly opposed further expansion of the SNP and the establishment of FSP or ENP. Because the construction licenses of FSP facilities and other supporting infrastructures had to be issued by the

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<sup>112</sup> Tang, Chingping, 1999, "The Institution and Strategy of NIMBY-Based Environmental Conflicts," in *Political Science Review (Zheng Zhi Ke Xue Lun Cong)*, Vol 10. Page 355-282, 1999.

local county office, the direct opposition from local county head would seriously hinder the progress of this project.

In the attempt of impeding the progress, Su tried to establish technical thresholds to block both the ENP and FSP plans established in Yunlin. She then used carbon tax and compensation funds to raise the difficulties in establishing energy-consuming facilities in this county. During 2006-2007, Su Zhifen kept claiming that the central government ought to reconsider the distribution of tax revenue, primarily because most of the tax paid by the Formosa directly went to the central government while pollutions was left in local neighborhood.<sup>113</sup> Su Zhifen claimed that she would not issue the construction licenses to FSP facilities if the central government failed to establish a reasonable “feedback mechanism”. In short, this was Su’s war against the high-pollution industry in Yunlin, especially the Formosa Group.

Acknowledging that this local resistance led by Su Zhifen may create one of the biggest hindrances to this investment, the MOEA officials therefore were anxious to reach agreements with Su Zhifen. The MOEA particularly formulated a “Mechanism for Local Investment Service” in the cabinet meetings in 2006 in order to reward local counties capable of pacifying local resistance against national-level investments. In this mechanism, Yunlin County could acquire 2.3 billion NTD (equal to 65 million

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<sup>113</sup> The SNP in Yunlin paid more than 30 billion NT dollars in tax to the government annually, but only ten percent of them was appropriated to Yunlin in 2006. See: Commercial Times (工商時報), March 27th, 2006.

USD) of subsidy in various forms of budgets, if both ENP and FSP cases eventually settled in Yunlin.<sup>114</sup>

There was also another side for this “rewarding mechanism.” Although this measure seemed to be a positive incentive for the local county office to accept those investments, local politicians in Yunlin believed that the central government was actually using this “subsidy mechanism” to threaten them. The central government in fact was holding some of the annual budgets against Yunlin local office until the local politicians were willing to cooperate on the FSP. Since Yunlin County was one of the poorest counties in Taiwan, this threat/reward from central government did create great pressure on local office and factions.

However, Su Zhifen refused this offer. She announced that this reward was not sufficient to earn the support of Yunlin civilians. She then turned to demand a “crutch plan,” which demanded a privilege for Yunlin County to run lottery business and other recreational industries. This was the first time that the local county office demanding local privilege in running lottery. Surprisingly, the CEPD director, Ho, promised to include this crutch plan into government’s FSP policy during her meeting with Su Zhifen in Yunlin.<sup>115</sup> Su also claimed she would endeavor to boycott the FSP plan if the central government could not properly handle both her crutch plan and

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<sup>114</sup> This reward for Yunlin’s accepting the FSP was 0.8 billion NT dollars. Economic Daily (經濟日報), March 29, 2007.

<sup>115</sup> UDN News (聯合報), March 31, 2007.

water supply problem. This fact suggested that the central administration had a very difficult time in assimilating Yunlin local polity into the state' goal. While incapable of responding to local county's vision of alternative development, the central government appeared powerless in realizing the project if local county office stepped in the way. In the end, the Formosa Group had to negotiate directly with the local office.

### **State Left Aside?**

In Su's "feedback mechanism", she planned to initiate a local carbon tax imposed on energy-intensive industries. Su's real intension behind this local tax was to use this measure to improve Yunlin's financial status after this county was heavily polluted. Even if she failed to stop the FSP plan, at least the Yunlin government would receive a fair share of tax revenue. By law, Yunlin County had to submit this act in the County Council and then submit to the Ministry of Treasury (MOT). Since the MOT clearly denied the legitimacy of this local tax, a legal reform was the only way in realizing Su's idea. Therefore, the support from local councilmen was quite crucial to the destiny of this local tax.

Despite Su's strong opposition, most local political factions' leaders controlling the county council, farmer's credit unions, and other local social-economic groups were closely associated with the Formosa. Because the land acquisitions and

contracting business brought by these major projects would generate huge profits, most politicians from local factions tend to support investments in the name of “development”, especially when the Formosa had build a great relationship with local faction leaders.

In 2006, owing to the mobilization from Formosa Group, the Yunlin County Council, filled with local faction members, refused to schedule the initiation of local carbon tax into the legislative meetings.<sup>116</sup> This political struggle in Yunlin forced Su to withdraw this local tax plan, and to start handling this issue in a more moderate way. Su then decided to collect “local contribution fee” on both projects to avoid legislative procedure<sup>117</sup>. Although it seemed very odd for local factional members to ignore this act since this tax may generate extra revenue for local county, it was actually quite rational because the profits brought by contracting business was more accessible than the tax revenue for local factions. It also illustrated the Formosa’s strong social influence on local politicians in Yunlin.

To accommodate with local factions, Su publicly announced that she would give her approval of construction license to the FSP only if the Yunlin government could receive “reasonable feedback”.<sup>118</sup> By this term, she referred to a local compensation system, which was equally appealing to local factions. According to a local

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<sup>116</sup> Economic Daily, August 29, 2006.

<sup>117</sup> Economic Daily, August 29, 2006. Two years later, Su was charged corruption because of this fee.

<sup>118</sup> Economical Daily (經濟日報), 2007 Feb. 13. <http://e-info.org.tw/node/19724>



environmentalist:

*“In fact, Su Zhifen still opposed the Formosa’s FSP plan. However, why did she make public statement that FSP was welcomed to Yunlin if the compensation system can be established? It was because the local politicians made her to do so. She had to make compromise, at least on the surface, she needed to do that.” (Quoted from the interview with the local environmentalist)*

In rural Yunlin, the local politicians sometimes literally described “The Formosa owns Yunlin,” since the company generated most local revenues and provided business opportunities for local factions (and their enterprises). This enormous corporation generated huge resources to feed local factions and created great incentives for local faction leaders to participate in the policy-making process. The most extreme case occurred in 2007 during the EIA public hearings in Yunlin, the chairman of Yunlin county council, Su Jinghuang, a leader of one local faction, strongly intervened in the procedure, even by incorporating violent actions against one EIA committee members in expressing his support to the corporations.<sup>119</sup>

For Chairman Su Jinghuang and several local town heads in Yunlin, the Formosa Group was their primary customer. Take Su Jinghuang for an example, his company

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<sup>119</sup> Su Jinghuang had a crime record of corruption, election bribery, and sexual assault. He is a typical example on the combination of local faction and mafia group. He and his brother had seriously showed their concerns to this case, and even attacked a famous EIA committee member, Rubin Winkler, in the public hearing to intimidate the activists. Su Jing Huang was convicted six-month sentence because of this assaulting action. UDN News., October 18<sup>th</sup>, 2008. See [http://city.udn.com/54543/3066043?tpno=2&cate\\_no=72284](http://city.udn.com/54543/3066043?tpno=2&cate_no=72284)

has been contracting the Formosa's ash-cleaning service for a long time. He and several local town heads were even prosecuted in 2008 because of monopolizing the ash-cleaning business from the Formosa Group. The prosecutor believed that the Formosa Group had been using ash-cleaning contracting services to bribe local politicians, for the company distributed ash-cleaning services of their six chimneys to various local politicians based on their weights and positions. According to the prosecutor, the profits for each chimney cleaned per year was estimated more than 0.6 million US dollars.<sup>120</sup> It was the prosecutor's suspicion that these local politicians thus provide "necessary services" such as acquiring necessary lands to Formosa in return for the FSP use.<sup>121</sup>

This scandal reflected the complex political-business relationship in Taiwan's local politics. Because most of the local factions operated companies associated with public infrastructures such as waste management, road construction, or truck transportation, they constantly needed new construction projects for maintaining their factions. According to a previous research conducted by Chen and Chu, more than ninety percent of the local factions in Taiwan possessed at least one oligarchy local business.<sup>122</sup> In addition, Huang's research on local factions in Yunlin suggests that

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<sup>120</sup> Liberty Times (自由時報), April 23rd.  
<http://www.libertytimes.com.tw/2008/new/apr/23/today-so1.htm>

<sup>121</sup> Liberty Times (自由時報), April 23, 2008.

<sup>122</sup> Chen Mingtong and Chu Yunhan, 1992. "Local Oligarchy Economy, Local Factions, and Local Elections" in *NSC Research and Social Science*(國科會研究彙刊人文及社會科學), Vol 2, Period 1,

the local factions combined with mafia groups had dominated the public construction businesses, and most of the deals were negotiated among local faction leaders.<sup>123</sup> The local factions were heavily depending on contracting, financing and cleaning services brought by these huge projects. While Yunlin was one of the poorest counties in Taiwan, the “tribute” from the Formosa Group thus enabled the Formosa to be more penetrative into the local politics.

This tight connection between the Formosa and local politicians was the major force enabling penetration into the local decision-making circle. The Formosa Group even mobilized the local factions to oppose GP’s ENP plan in Yunlin. This animosity from the local factions against the GP contributed to a slow progress in GP’s initiation of ENP in Yunlin, until GP’s new president built his own personal connection with other local faction leaders after 2005.<sup>124</sup> The facts suggested that, to developers, forming connections with local leaders seemed to be more effective than going through the central government. The central government appeared more incapable in managing local resistance and responding to local demands. In a way, the Formosa’s penetrative capacity may be stronger than the state in terms of implementation in the local level.

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pp23-70.

<sup>123</sup> Huang, Ronghui, 2005, *A Research on Black-Gold Local Factions in Taiwan* (台灣地方派系黑金政治之研究), Jiayi: National Chungcheng University, Master Thesis.

<sup>124</sup> Lu, Ibid, chapter 3.

### **State's Strike Back against Local Resistances**

This weak penetrative capacity of the central government led to the fact that the corporations had to deal with local politics in the frontline. This, however, did not necessarily mean the state surrendered itself to local politicians. While there was a relatively stable relationship between the Formosa and the local politicians in Yunlin, conflicts occurred when mutual benefits could not be achieved. In this circumstance, the state exerted resources to punish uncooperative local strongmen.

In 2008, there was a series of legal actions against local politicians to domesticate local politicians in Yunlin. The first target was the chairman of county council, Su Jinghuang. In April 2008, Su and some other faction members, most of whom were village heads, were prosecuted because of “threatening” the Formosa Group in order to monopolize ash-cleaning contracts of the SNP. While interests exchange between corporations and local politicians may be ordinary, the chairman’s brutal action broke this pact.

The second target was the county head, Su Zhifen. In November 2008, Su Zhifen was prosecuted as well for involving with a bribery scandal, suggesting that Su demanded and accepted bribery in an amount 2 million NT dollars from the Formosa and other companies. There was a claim on the prosecuting party that Su Zhifen had demanded bribery from developers in the name of “contribution fee” and distributed

money to some council members. Some legal experts considered this prosecution flawed because it was confirmed later by the prosecutors that Su personally did not benefit from this contribution fee.<sup>125</sup>

These prosecutions were targeted campaigns. The prosecution against Su Jinghuang was related to punishment on local factions, and the one against Su Zhifen was to give a lesson to her for her effort to establish an institutionalized “feedback funds” in impeding state’s penetration into local level. In both cases, different government agencies, even the local EPA officials in Yunlin were prosecuted<sup>126</sup>, but the corporations sending the bribery, the Formosa, were left untouched, which means the prosecutor aimed at the local resistance solely. The prosecutor also asserted that the purpose of this prosecution was to “clean up the dreadful environment in Yunlin for investors”<sup>127</sup>. Such a provocative statement indicated the intension of state’s actions.

While the corruption charge against the former President Chen Shuibian was also launched at the same time, some DPP politicians believed that the prosecution against

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<sup>125</sup> These were serious legal flaws in this legal case. First, the indictment mentioned the vice chairman of County Council, Shen Zhonglong, was the one who actually received the bribery, or broker fee as Shen described. Shen also admitted he did receive 0.5-million US dollars from the Formosa Group. However, the prosecutor, instead of choosing to hold Shen into the custody, he decided to detain Su Zhifen without even conducting interrogations on her. Second, the prosecutor also admitted to the media that there was “no money falling into Su’s pocket.” The reason that he prosecuted against Su was that Su demanded money from corporations, although Su herself did not benefited from it. In other words, Su should not demand money from private companies in any way, even it was for public use.

<sup>126</sup> There were also two EPA officials, one trade union leader, and vice chairperson of Yunlin council prosecuted. See

<http://www.tourtw.org/doc/1008/0/0/9/100800927.html?coluid=0&kindid=0&docid=100800927>

<sup>127</sup> China times (中國時報), November 15, 2008.

Su Zhifen was a part of partisan struggle since these actions occurred right after the DPP stepped down the office in 2008.<sup>128</sup> Nonetheless, there was little sign to suggest Su's case was part of the political conspiracy against the DPP, mostly because many KMT influential local politicians were also on the list of prosecution.<sup>129</sup>

Therefore, the prosecution against Su Zhifeng and Su Jinghuang could be better perceived as a joint attempt by the state and corporations to domesticate local politicians who were not cooperating on the state's agenda. Although building direct business-political relationship in the local level appeared to be more effective in penetrating local level, the state would reclaim their authority when the corporations failed to reach agreement with local factions.

### **Economic Rationality**

As a national-level investment project consuming great amount of resources, the FSP plan was supposed to receive more attentions on the analysis of cost-effectiveness of this investment. However, the MOEA did not seem to evaluate the cost-effectiveness of this plan carefully. Hence, the rationality behind the FSP was arguable.

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<sup>128</sup> In fact, there were three major DPP politicians taken into custody in 2008 under the charges of corruption in 2008. They were former President Chen Shuibian, county head Su Zhifeng in Yunlin, and county head Chen Mingwen in Jiayi. Most of the DPP supporters believe that it was a political suppression against the DPP after the KMT regained its power.

<sup>129</sup> In Su Zhifeng's case, the vice Chairman of Yunlin County Council, KMT-affiliated Shen Zhonglong, were also prosecuted. Considering the KMT-affiliated chairman, Su Jinghuang, was also prosecuted in April 2008 because of threatening the Formosa Group in order to monopolize chimney-cleaning contracts, the most powerful two KMT political figures thus both encountered criminal charges under the KMT administration. If this were a partisan struggle aiming on the DPP politician, it would also impair the KMT's political influences in Yunlin.

## **The Necessity of the FSP Project in Steel Industry**

The role of steel sector in the industrial chain was a core issue on the FSP plan, because steel was considered part of the foundation in the formation strong industrial chains. Although the steel was an important raw material for industrialization, it was very arguable that steel production was a strategic industry for Taiwan. Aside from the energy-intensive and capital-intensive features of the steel sector, the cumbersome character of steel products rendered them domestic market-oriented. This industry was better suited for meeting domestic demands rather than exportation.

Besides, the steel-making industry was less associated with industrial technology innovation. The Formosa had sought for tax benefit from the MOEA by framing the FSP plan as a “New Strategic Sector”. However, this request was soon rejected by the MOEA in 2005. The MOEA believed that steel-making was categorized as a traditional sector, for it was less involved with new technology.<sup>130</sup> Since the establishment new steel-making facility would not contribute to technological advantage, the necessity of the FSP plan may be dependent on its role in domestic industrial chain.

The market demands of steel were determined by the character or business cycles of downstream sectors. Some countries, like Japan and Korea, developed huge

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<sup>130</sup> Having said so, the MOEA still granted the FSP another tax benefit because the FSP will be established in the rural and poor area. See Commercial Times(工商時報), July 14<sup>th</sup>, 2005.

steel-making plans primarily because there existing strong domestic demands from heavy industrial sectors. For instance, automobiles or electronics industries demanded constant supply of steel materials. However, most of Taiwan's industrial sectors were based on light industry associated with household use or semiconductor industry. There were barely strong downstream sectors for steel-making industry. Besides, the further expansion of this sector was limited because most downstream sectors of steel industry in Taiwan had reached maturity stage. During 2000-2004, several Taiwanese steel-making companies were forced to be merged and shut down. It was widely suspected whether Taiwan needed more large-scale steel-making facilities.

During the EIA reviews on the FSP plan, the competitor of the FSP, state-owned China Steel Company (CS) sent a memo to the EIA committee. This memo opposed the FSP project based on several reasons:

First, according to the estimation of Taiwan Steel and Iron Industries Association (TSIIA), the growth of demand on raw materials was only 2.07% per year during 2005-2009. Since Taiwan's self-sufficient rate of raw steel had reached 75% in 2006, the needs for raw steel on Taiwan's domestic market was not significant. Considering the MOEA has approved another two medium-size projects of steel-making factories, the gap between supply and demand of Taiwan's raw steel market was not large enough to support the FSP's huge productivity. In other words, the domestic market



of steel products was almost full in Taiwan.

Second, the self-sufficient rate of steel products in Taiwan has already reached 120% in 2006, which meant that there were about five million tons of steel products over-produced in Taiwan. Considering some domestic steel buyers had to import customized steel products from overseas sources, there were actually about eight million tons of steel products overproduced and needed to be digested since 2006.

Third, although the Formosa Group claimed that the FSP would produce high-quality steel products to make market segmentation from other steel providers, the usage of high-quality steel products was usually adopted in automobile and electronic industries, which were quite insignificant in Taiwan. Such low domestic demand could result in future over-supply of steel products, and the Formosa will have to export their products.

Fourth, concluded from above reasons, the FSP will inevitably digest their production by underselling the products overseas. This would create a huge inefficiency since the FSP would consume energy in Taiwan while producing unequal utility. This inefficiency of resources allocation in energy use may cause the waste of state's opportunity costs.<sup>131</sup>

Ironically, the Formosa Group also asserted that over-production would happen

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<sup>131</sup> See TSIIA website, [http://www.forging.org.tw/forging\\_product\\_detail.asp?FN\\_Id=290](http://www.forging.org.tw/forging_product_detail.asp?FN_Id=290).

after the FSP starts operation. Instead of improving the efficiency of this plan, the Formosa initiated a strategy to control the market through “joint pricing.” In the EIA reviews, the Formosa suggested that FSP and the CS should cooperate to employ price control on steel products.<sup>132</sup> This absurd statement proved that the FSP was an inefficient investment, which will generate more barriers in the steel market. While the MOEA always claimed that the FSP plan might promote competition between two steel-making giants, the FSP’s proposition on joint-pricing made a best footnote in the FSP’s entrance into the steel market.

### **Limited Domestic Demands on Steel Products**

According to the MOEA’s “Policy EIA Report on Steel Industry (PERSI)” in 2010, domestic needs for steel products in Taiwan have declined starting from 2003 due to saturation of domestic market. Therefore, while the self-sufficient rate remained unchanged, the exportation of the steel products had consistently increased since 2003-2008.<sup>133</sup> The numbers revealed that the overstock problem have constantly prevailed in Taiwan

In this report, the scholars also made a prediction on the steel market in Taiwan. With normal economic growth, the domestic demand will only surpassed the total supply 5.15 million tons annually in 2025.<sup>134</sup> However, the FSP plan would at least

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<sup>132</sup> Economics Daily, May 30, 2006.

<sup>133</sup> MOEA, *Policy EIA Report on Steel Industry*, page 26-27.

<sup>134</sup> MOEA, *Policy EIA Report on Steel Industry*, page 60-64.

produce 7.5 millions annually. Even the domestic market in 2025 will not be capable to afford digesting the FSP's current production. In fact, in 2007, the self-sufficient rate of downstream steel products had already reached 119%, and Taiwan's steel sector had to export six million of steel products to China.<sup>135</sup>

In PERSI report, the MOEA also quoted the stats from the WSA (World Steel Association) and concluded that steel industry was inclined to be influenced by global market fluctuation. The MOEA proposed that, while the global demand for steel has gradually decreased, the primary goal in the development of the steel industry was to "meet domestic demands<sup>136</sup>". However, because there were very limited extra domestic demands on steel products, the establishment of the FSP based on the goal to meet "domestic demand" appeared to be a very controversial choice.

In fact, operating the FSP plan without causing over-production is already a difficult task. It could only be realized with two conditions being fulfilled. First, the CS must reach agreements with the Formosa both on the price control and on the division of labor of steel products. However, this twisted mechanism would contribute to the Taiwan's domestic market deviated from a competitive one. Second, the downstream industrial sectors must be successfully built to enlarge the market. Nevertheless, there was little sign revealing that both conditions could be met.

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<sup>135</sup> UDN News, October 13, 2007.

<sup>136</sup> MOEA, *Policy EIA Report on Steel Industry*, page 13-14.

The MOEA also acknowledged the potential risks of over-production problems because domestic demands on steel products were not significant enough to sustain a new FSP plan. In order to solve this fallacy, the MOEA promised to “nurture downstream industrial sectors” to transform current “sellers’ market to buyers’ market”<sup>137</sup>. In other words, their solutions were to create new domestic demands, which might result in more inefficiency for these newly introduced sectors were not originally targeted industries that the government wanted to develop at the first place. The MOEA created them only to digest forthcoming productions brought by the new FSP plan. This initiation was rather a provisional arrangement than a comprehensive economic plan.

As a matter of facts, far from a decade ago, the MOEA had recognized that given the limited domestic demands, another grand-sized steel-making facility may not needed in Taiwan. In 2001, the CS attempted to initiate a new program very similar to the FSP plan. However, most of the steel-making enterprises expressed their doubts on this expansion because both global and domestic demands were quite weak. At that time, both the director and the vice director of MOEA disagreed with the decision of the CS since the expansion of steel-making industry was no longer appealing given

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<sup>137</sup> See the *2006 Annual Project Report: The Project to Enhance Competitiveness of Downstream Metal Industry*. MOEA website: [http://www.moeaidb.gov.tw/2009/ctrl%3FPRO%3Dfilepath.DownloadFile%26f%3Dexecutive%26t%3Df%26id%3D738&sa=U&ei=YSrrTNbhCceecL6imfOO&ved=0CA8QFjAA&usg=AFQjCNHMAUWxhg\\_CU2-Se0n-o1JUJZ2pmA](http://www.moeaidb.gov.tw/2009/ctrl%3FPRO%3Dfilepath.DownloadFile%26f%3Dexecutive%26t%3Df%26id%3D738&sa=U&ei=YSrrTNbhCceecL6imfOO&ved=0CA8QFjAA&usg=AFQjCNHMAUWxhg_CU2-Se0n-o1JUJZ2pmA) page 138-139.

its uncertain future.<sup>138</sup> The MOEA staffs believed that the investment on a new grand steel-making plan was not cost-effective considering the heavy financial costs (three billion USD) and environmental costs that the new plan would generate. The director of MOEA, Lin, thus asked the CS to conduct a “feasibility analysis” first, implying that the MOEA was questioning the overall utility of establishing another grand-scale steel-making facility in Taiwan.

However, after four years, while there was very little change on the demand and supply in steel market, the MOEA transformed itself into a zealous supporter on the FSP program. The inconsistency of MOEA’s actions illustrated that MOEA’s political concerns in controlling capitals had compromised its rational judgment on the FSP plan.

### **Inefficiency from the Perspective of Total Utility**

The other problem of developing steel industry was their detrimental environmental impacts. According to the PERSI Report, the Taiwan’s current steel industry had been responsible for a huge scale of environmental degradation. Especially on the energy use and carbon emissions, steel industry has been listed as the top sector among all industries in Taiwan. Therefore, whether or not to further develop steel industry was a very controversial issue.

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<sup>138</sup> *New Taiwan News Magazine* (新台灣新聞週刊), July 5<sup>th</sup>, 2001. Vol 276. <http://www.newtaiwan.com.tw/bulletinview.jsp?bulletinid=7151>

Though the Formosa Group claimed that the FSP project would generate approximately 5% of GDP, some economist believed that the FSP could only add less than 1% of GDP to Taiwan's growth.<sup>139</sup> During the EIA sessions, the EIA committee members also proved that the contribution of the FSP was less than 0.5%, and they made a strong request for the FSP to conduct more analysis on future external costs.<sup>140</sup> This was an indication that the FSP's economical contribution may be over-estimated even in the sole regard of producing GDP.

With huge negative impacts brought by the steel industry, the economic efficiency of a new grand-scale steel facility was an issue for further debates. In the PERSI report, the MOEA proposed three possible directions on the future development of Taiwan's steel industry as follows:

**Table 3.2 the Possible Scenarios in Developing Taiwan's Steel Industry**

	How to fill the gap between supply and demand?	Self-Sufficient Rate	State's Actions
Proposal A	Full Domestic supply	99 %	New Grand Scale Facilities
Proposal B	70% from domestic, 30% from importation	94 %	Structural Adjustment Facility Upgrade
Proposal C	Full importation	83.19%	Regional Alliance

Source: the PERSI Report, 2010.

<sup>139</sup> Wu Zhaiyi (吳再益), 3E Long-Term development, China Times, July 1<sup>st</sup>, 2006. Former Legislator Wang Tufa (王塗發) also believed that energy intensive industries in Taiwan only produced 5% GDP while consuming more than 33% of the energy resources. See environmental news: [http://shuchuan7.blogspot.com/2010/07/blog-post\\_30.html](http://shuchuan7.blogspot.com/2010/07/blog-post_30.html)

<sup>140</sup> Commercial Times (工商時報), May 18<sup>th</sup>, 2006.

Among these three proposals, proposal C would effectively reduce current environmental degradation or prevent it from worsening in most aspects. Surprisingly, it will only cause a slight decrease in the regard of output value. From the environmental perspective, the proposal C would be a better choice.

Most steel enterprises would agree the proposal B may be a more moderate and desirable solution since it was a compromise among all stakeholders. Generally speaking, this proposal could alleviate a small portion of environmental pressure while producing almost identical amount of output value compared to both the null proposal (the state does nothing) and proposal A. In fact, most of the scholars and steel enterprises considered that proposal B would be the optimal choice. Even the steel enterprises in Taiwan rather chose proposal B than A (fully self-sufficient).

Most important, in both proposal B and C, a huge steel-making facility such as the FSP plan was not needed. It was only proposal A that included a possibility of large expansion to reach fully self-sufficient status. According to the PERSI report, the reason that a grand-scale steel-making facility was excluded in most proposals was because such plan was proven less effective in relation to energy efficiency and detrimental to the environment. In fact, most of the domestic steel companies believed that the entire steel industry would be better off if the 7.5 million of new

production brought by the FSP does not exist in Taiwan.<sup>141</sup> Furthermore, the difference of total output value between the proposal A and the null proposal was insignificant, which suggested that the FSP plan might not create much difference from state's doing nothing on the steel industry.

Therefore, the FSP appeared not an efficient investment considering there might be better alternatives in both economic and environmental perspectives. In proposal B and C, simply upgrading current facilities and conducting structural adjustment could attain very similar result in a much less costly way.

### **Inefficacy of the Private Capital**

Throughout the period from 2004 to 2008, the true intention of the Formosa in building the FSP was quite uncertain. Other than the fact that the Formosa might choose to submit this program in Yunlin in order to delay the GP, Formosa's tactical relationship with the China Steel and other steel enterprises also aroused more question marks. Most importantly, as a matter of economic efficiency, the FSP plan also posed inefficiency on the Formosa itself.

Developing steel industry and automobile industry were both the fantasies of the Formosa's founder, Wang. Starting in 1995, Wang had been searching suitable locations to set up steel-making plants. In pursuing his passion in entering steel

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<sup>141</sup> Economy Daily (經濟日報), October 17<sup>th</sup>, 2008.



market, Wang also personally visited Zhangzhou (China) in 2003 and to Ningbo and Qingdao (China) in 2004 to explore the possibility in establishing steel plants in these places.<sup>142</sup> From those facts, one could see that Wang's desire in entering steel market was quite strong.

However, most Taiwan steel companies still did not believe that the Formosa Group as a company, other than Wang in person, was that determined to implement the FSP plan in Taiwan, mostly because the domestic market had been full. In fact, the Formosa also recognized this limitation. During the EIA sessions, instead of submitting clear goals in entering steel market of Taiwan, the Formosa basically adopted China Steel's abandoned plan made in 2001. Formosa merely presented a vague picture in describing possible profitability in Taiwan's future steel market. While the EIA member pointed out a prevailing problem on over-production of steel products in Taiwan's steel market, the Formosa's representative only expressed that new demands could be created after the construction of the FSP. As an interests-driven private firm, the Formosa's proposition on the FSP's profitability did not appear very rational.

The gap between Wang's passion and Formosa's lingering attitude was resulted from the uneven distribution of demands in global steel market. While the steel

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<sup>142</sup> Business Weekly (商業週刊), Volume 1077, July 14<sup>th</sup>, 2008.  
<http://www.businessweekly.com.tw/webarticle.php?id=33717&p=1>

markets in developed countries were considerably full, the new demands of steel products were very proportional geographically. Most new demands came from newly industrialized countries. Therefore, the best strategy for the Formosa Group was to enter these new markets instead of initiating the FSP in Taiwan.

Therefore, when Wang passed away in 2008, the proposal of the FSP plan in Taiwan immediately froze because the Formosa finally had an opportunity to review this option without personal bias from their founder. In June 2008, the Formosa officially announced that the group would spend 17 billion USD, later raised to 23 billion in 2010, to start a huge steel-making program in Vung Ang Economic Zone, Vietnam. The Formosa planned to build its first wharf in 36 months and an iron foundry and steel mill within 48 months. In the first phase, the iron foundry and steel complex would have a combined output of 7.5 million tons a year, while the Son Duong deep-water port will be able to handle 27-30 million tons of cargo.<sup>143</sup> Once the steel facilities were fully operated, the annual production would be 300 million tons. The scale of the Formosa's steel-making plant was four times bigger than the FSP plan in Taiwan. When completed, this iron and steel plant will be the largest in ASEAN and one of the 15 largest in the world.

Although there was a certain level of market segmentation between the FSP and

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<sup>143</sup> Vietnam Business and Economy News, August 10<sup>th</sup>, 2010.  
<http://www.vneconomynews.com/2010/08/formosa-group-to-lift-investment-in.html>

its Vietnam counterpart, the Formosa decided to stop the FSP project because there was no apparent comparative advantage in starting it in Taiwan. Besides, the Formosa's capital outflow, along with other steel companies, from developed countries into new industrialized counties was a global trend. For instance, Korean's major steel company, Posco, also recently decided to spend 1.6 trillion won (\$1.41 billion) on building a new plant in India to expand its output capacity.<sup>144</sup> The completion of the plant construction will be by the end of 2013, while Posco expected the demand for cold-rolled steel products in India to rise at an annual rate of 12.5 percent through 2018. In addition, Japan's biggest steel company, Nippon Steel Corp, also planned to spend 500 to 600 billion yen on the mill in the southeastern city of Cubatao, Brasil, to build a new production facility amid stiff competition in fast-growing economies.<sup>145</sup> This trend suggested that the steel industry has been migrating closer to those new economies.

The advantages for those steel giants to migrate to new economies were as follows. First, to alleviate domestic environmental pressures brought by the steel industry; second, to meet new market demands; and third, to nestle up against iron resources.<sup>146</sup> Given growing new demands in Southeast Asia, South America and

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<sup>144</sup> JoongAng Daily, November 20<sup>th</sup>, 2010.

<http://joongangdaily.joins.com/article/view.asp?aid=2928628>

<sup>145</sup> Financial Express, March 25, 2009.

[http://www.thefinancialexpress-bd.com/more.php?news\\_id=28981](http://www.thefinancialexpress-bd.com/more.php?news_id=28981)

<sup>146</sup> Twenty One Century Economy Report (二十一世紀經濟報導), August 21<sup>st</sup>, 2010.

<http://nf.nfdaily.cn/nanfangdaily/21cn/200808210062.asp>

India, the migration had become a very spontaneous action for these enterprises to follow changing trends in global steel market. Under this circumstance, the low utility of the FSP plan in Taiwan made it an unfavorable option even for the Formosa itself.

Interestingly, after the Formosa started to implement their Vietnam plan, the China Steel expressed strong desires to cooperate with the Formosa in Vietnam.<sup>147</sup> In 2010, as a SOE, the CS had declared that they would spend 150 million USD to invest on Formosa's Vietnam plan.<sup>148</sup> This cooperation between two rivalries illustrated that the migration to new economies in this industry was a prevailing and beneficial situation.

Therefore, in terms of the economic rationality of promoting the FSP plan, the performance of Taiwan's MOEA was very questionable. Not only its utility may not reconcile its environmental and other external costs, but the low profitability of the FSP in Taiwan also created internal inefficiency for both Taiwan's steel market and the Formosa itself. While the MOEA clearly expressed their capacity in rational planning on the CS's expansion in 2001, it failed to adopt the same standard to review the FSP plan. With strong intention to follow previous path in stimulating the economy by keeping these capitals-intensive plans in Taiwan, the state unfortunately may end up creating unsatisfactory economic benefit for Taiwan's industrial

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<sup>147</sup> Economy Daily (經濟日報), March 11, 2008.

<sup>148</sup> Apply Daily, August 27<sup>th</sup>, 2010.

[http://tw.nextmedia.com/applenews/article/art\\_id/32768072/IssueID/20100827](http://tw.nextmedia.com/applenews/article/art_id/32768072/IssueID/20100827)

development. This inefficiency had not been corrected until the EIA committee forced the MOEA to deliver a “policy EIA proposal” (PERSI) on Taiwan’s steel industry in 2010. In this report, the MOEA eventually admitted, though indirectly, that the FSP plan might not be as significant as the MOEA originally claimed in the first place, given its limited total economic efficiency.

### **The Deliberation**

With massive interests’ conflicts and controversial facts, the establishment of the FSP plan required multi-lateral deliberation from different sectors. Even though the Formosa displayed reluctance in bringing the decision-making process out of the MOEA, public participation proved to be important in altering state and the Formosa’s decision-making on the FSP.

### **Public Checks on the Formosa Group Took Off**

The Formosa had been quite reluctant to release any information on potential detrimental impacts on Taiwan’s environment and agricultural sectors. The unsatisfactory environmental record of the Formosa’s SNP also aroused widespread suspicion from local residents.<sup>149</sup> Yunlin residents had been seriously troubled by their poor health condition caused by the Formosa’s SNP. However, the Formosa

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<sup>149</sup> Before the establishment of the SNP, the Formosa promised to provide zero-pollution industrial process and help to develop Yunlin County. However, after the SNP was built, most of the promises were abandoned.

refused to take responsibility on the pollutions produced by them.<sup>150</sup>

In the 2010 public health evaluation conducted by the EPA in 2010, it was suggested that the cancer rate of males living adjacent to the SNP was 1.7 times higher than the national average. However, the Formosa claimed, “there was no causal linkage with the SNP” proved in this research, and proposed that most of the illness was mainly associated with local residents’ unhealthy living habits such as smoking.<sup>151</sup> In the EIA reviews on the FSP plan, the Formosa again claimed that the FSP plan would not damage the local environment. Their EIA proposal even suggested that the air quality in central Taiwan area would remain unchanged after the FSP starts operation.<sup>152</sup>

The Formosa’s EIA proposal also concealed the possible threats that the FSP may bring on local fish farming. The Formosa proposal described that the FSP would hardly create any negative impacts on local fish-farming business. Most EIA committee members could not agree with this notion and considered the numbers provided by the Formosa unacceptable.<sup>153</sup> While the EIA committee kept requesting the Formosa to supplement more data, the Formosa refused to comply with the committee’s requests.

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<sup>150</sup> Before 2007, the Yunlin EPA branch had already fined the SNP more than sixty time for the SNP failed to regulate their toxic VOCs. Due to the poor air quality, the students in local elementary school had to wear masks in the classroom.

<sup>151</sup> See: <http://www.nownews.com/2010/10/29/327-2659625.htm>

<sup>152</sup> This was based on an interview with an activist.

<sup>153</sup> In Formosa’s proposals, they even calculated that the fish-farmers would benefit from the FSP since they tried to manipulate the data. See: <http://www.coolloud.org.tw/node/10996>

Furthermore, on CO2 issue, the Formosa also revealed its intention to evade monitoring from state's supervisory institution. In fact, the FSP plan and the possible future expansion of the SNP combined would consist of one third of total CO2 emission in Taiwan once they started operation. Although most of the EIA committee members asked the Formosa to submit solutions for this high volume of energy consumption, the Formosa pretended that these questions were non-existent. A committee member described that:

*“They refused to directly answer the questioned we posed. They repeated their tone again and again, but only filled with emptiness and vagueness. Every time they sent in the “revised” EIA proposal, the previous flaws were actually untouched. Both sides were in an endless cycle. They disliked the fact that we were asking the same questions every time, and we were unhappy that we did not get to see what we want even we asked for them every time”. (Interview quotes from one EIA committee member)*

The Formosa at least showed some respect to the EIA sessions, but they were not up to communicate when facing local residents and civil groups. In the public hearings on the “feedback mechanisms” held by Legislative Yuan in 2007, the Formosa's delegation was absent. This evasive attitude gave very little room for further public deliberation. Furthermore, this lacking of meaningful communication

deepened the deliberation deficit since local residents did not have the luxury to participate in these meetings in Taipei on a regular basis. Therefore, the local stakeholders such as oyster fish farmers were seriously under-represented in the process. Instead, the local factions associated with the Formosa were quite efficient in providing mobilizing resources. This lack of meaningful public participation sometimes contributed to over-simplified conclusions.

With the Formosa's reluctance in communicating with local groups, it was difficult for the EIA committee to determine the extent to which the local community was affected by the future FSP plan. To solve this democratic deficiency, in March 2007, some EIA committee members decided to hold an open-ended seminar in Yunlin and directly listen to the local community. This was the first time that the EIA committee members initiated "go to the local."

In the seminar, the EIA committee members found that the Formosa had intentionally concealed the health risks of FSP and SNP from the local communities, and local residents were exhibiting much dissatisfaction toward the Formosa's SNP. Most of the local participants expressed their grievances and criticized the Formosa's disappointing environmental performance in Yunlin. However, most of the residents felt powerless in changing the situation. Some even considered selling their land to



the Formosa in order to restart their lives somewhere else.<sup>154</sup>

Although disagreements existed in the seminar, this channel provided a platform for local participants in reviewing this policy. It empowered local oyster-farmers to compete with local factions in terms of interpreting local development, since local oyster farmers had chances to be brought into the policy networks. This local hearing held by the EIA committee was confirmed significant in later EIA reviews.

In October 2007, under political pressure, the EPA attempted to manipulate the EIA process in approving the EIA reviews on the FSP plan to the soonest. The intervention allowed the FSP plan to skip a robust EIA review, and aroused the massive activism in Yunlin local communities. In the EIA sessions next month, the oyster farmers launched protests and submitted data to the EIA committee to prove Formosa's unwillingness in collecting information on marine ecosystem. The EIA committee members thus officially decided that the FSP plan had to go through a robust EIA review, also called second-stage EIA review. Although violence against environmental activists did occur along with the EIA reviews, the public participation reversed the disadvantage of local resident for their opinions were included into the EIA review through a more institutional channel. Starting from the FSP plan, the public deliberation had been institutionalized via better practices within the EIA

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<sup>154</sup> This statement was based on an interview with an EIA committee member.

committee.

### **State's Accountability and Transparency**

The more intense conflicts on the FSP plan blew out during Premier Su Zhenchang's term since January 2006. The EIA committee members began to complain about the "political pressures from above". In 2006, some EIA members made an announcement--"EIA Is Dead"--against the Premier Su, in resisting his intervention in the EIA procedure. Through out 2004-2008, the state's accountability on the FSP plan was quite shoddy, since the DPP administration and the MOEA came to intervene for the EIA reviews.

### **State's Political Intervention into the EIA**

While the Premier Su was regarded as a competitive potential candidate for the DPP in 2008 presidential campaign, the FSP plan turned into a touchstone in examining Su's governing ability. Hence, Premier Su was quite ambitious in shaping the image that he has a diligent and resolute leadership. During his 12-years local governing as the county heads of both Pingdong and Taipei, he was quite famous in bolstering local economy by delivering grand-scale constructions in the amount of 250 billion NT dollars (equal to 7.2 billion USD). He also tried to use those enormous public spending to acquire the friendship in different local counties and to earn a

positive nationwide image.<sup>155</sup>

Although he received good reputation because of his fast achievements, his favor of grand-scale constructions in stimulating economies also induced criticism. His well-known statement “there must be sacrifices for major constructions” proposed in February 2007 as the government intended to demolish a historic health institute filled with leprosy patients in completing a metro-rail system might well reflected his priority of values in public policy.<sup>156</sup> To make good use of his Premier position, Su thus proposed a slogan of “Great Investments; Great Warmness” to stimulate economic growth rate by posing huge public investments, including the FSP plan. Consequently, while he was determined to realize these capital-intensive programs, his conflicts with the EIA committee members and EPA director, Chang, thus occurred.

In the early stage, Su formed a cross-department meeting to review the process of these major investments in a weekly base, which meant relevant government agencies had to report progress of each case to him every week. In March 2007, the MOEA director, Chen, disputed with the EPA director, Chang, in the Executive Yuan

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<sup>155</sup> Under his eight-year term as county head of Taipei, he turned a 15-billion TWD budget surplus into an 80-billion TWD deficit, and made Taipei County as the number one debtor among 23 counties. See UDN News, December 19, 2005.

<sup>156</sup> This institute, Lesheng, was a legacy of Japanese colonization. Japanese government used it to segregate leprosy patients. Most residents there have no place to go since they have lived here for more than 50 years. While the Culture Construction Committee suggest it could be a historic inheritance, the central government still plan to demolish it since it blocks the metro-rail system.  
<http://www.wretch.cc/blog/htycy/6595967>

meetings because MOEA has become very impatient with the slow progress of the FSP plan under the EIA review.

In order to carry out Su's determination, the vice Premier Cai Yingwen during 2006-2008 (current DPP chairwoman) also made bleak comments against the EPA. She thus asked the EPA to establish a standardized mechanism based on the *Administrative Procedural Act*, and to give a concrete period to notify the developers.<sup>157</sup> Cai believed that the administration ought to take actions to earn supports from the industrial sectors for the purpose of building a new business-friendly image.

As an environmental activist, Chang actively delayed both the FSP and the ENP plans, for both plans were energy-intensive sectors with serious pollutions. Most MOEA officials believed that Chang was capable of persuading most EIA committee members into cooperating with the MOEA because he had been a prestigious environmental activist. However, Chang insisted that each committee member made one's decision independently.<sup>158</sup> Despite of the fact that each EIA committee member operated independently, Chang, like most EPA directors, was capable of influencing the members most of the time.<sup>159</sup> Chang's intentional inaction in the EIA review meetings on both the FSP and ENP plans through 2006-2007 particularly revealed the

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<sup>157</sup> Economics Daily, March 29, 2007.

<sup>158</sup> Economic Daily, March 27, 2007.

<sup>159</sup> Most of the interviewed EIA members suggested that the chairman (Chang, most of the time) can dominate the agenda in different ways.

fact that he personally would oppose both plans.

However, with growing political pressure upon the EPA from Su's administration, Chang had to make compromises. In June 2006, Chang helped another controversial case, Central Taiwan Scientific Park (CTSP) in Holi-Chixing to pass the EIA review. In fact, Chang was actually using the CTSP plan in exchange for the privilege impeding both the FSP and ENP plans. The reason was that he perceived that the latter two projects were much more detrimental than CTSP's Holi-Chixing plan. The details will be given in next chapter.

Acknowledging that Chang's antagonistic attitudes toward the Formosa Group might result in a great gridlock on the FSP plan, the Premier Su then decided to recruit someone that he could trust to operate in the EPA. In 2006, Su appointed Chang Zhijing, who has worked with him for more than a decade, as the deputy director of the EPA. Since then, Chang Zhijing began to actively participate in the EIA reviews. According to the EIA committee members, the deputy director Chang Zhijiang constantly supervised the EIA process and "passed the concerns of Premier Su" to the committee members. In the later stage of Chang Guolong's term as the EPA director, his deputy director took a very firm position in the discussion within the EIA committee, and even provocatively dominate the EIA process.<sup>160</sup> Chang Zhijiang's

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<sup>160</sup> About the provocative behaviors of deputy director Chang Zhijing in the EIA, please also see Su, Sang-ying. (2008). *The Research of Lobbying Strategy in the Environmental Assessment by Environmental Groups: Policy Network Analysis*, Master Thesis, National Chengkung University:

behavior was so provocative that it even stirred prevailing resentment of the EIA committee members.

Because of the intense political pressure, Chang Guolong decided to resign from the position of EPA director in 2007. Su also left his Premier position for he was about to run presidential campaigns. Nevertheless, their leaving office did not cease the manipulation; the MOEA staff soon recognized that the Formosa might start another plan in Vietnam if the pace of EIA review failed to meet the demands of the Formosa Group.

### **Manipulation of the EIA Process**

To save this capital from outflow, the DPP administration made a “strategic move” to reduce the interferences from environmental groups. Through a series of struggles, the DPP administration concluded that some hardcore activists and experts in the EIA committee were the major obstacles shaping the gridlock. These grassroots activists were included into the committee during the term 2005-2007 because of Chang Guolong’s faith in promoting civic participation into the policy-process. Because the EIA members served only two years each term, the current term of EIA committee members at that time would be no longer in the position after August 2007. This indicated that a quick way to improve the “efficiency” of EIA review process on

the FSP was to build a more “cooperative” EIA committee after August 2007.

There were two steps for the DPP administration to implement this plan. First, the EPA staff started to delay current EIA reviews. The EPA unprecedentedly cancelled monthly EIA reviews for consecutive two months and postponed them to the timeline after August 2007. In the EIA meetings in June 2007, an EIA review session was finally arranged; however, the EPA staff refused to incorporate the FSP case into the agenda, claiming that the request of Yunlin local government was still pending and awaiting the explanation from the Ministry of Justice.<sup>161</sup> Although the EIA committee members urged the EPA to place the FSP plan on the discussion table before August, the EPA remained quite dormant. The intention for the EPA staff and the DPP administration was to avoid conflicts in the current EIA committee at that time.<sup>162</sup>

Meanwhile, there was another disputing case, coal-powered generator in Zhanghua marine area. The EIA committee officially turned down the EIA proposal of the developer (state-owned Tai-power) in April 2007, which meant this project was not allowed to begin. Two months after the rejection, however, the MOEA requested to “withdraw” the case. Surprisingly, the EPA violated the *EIA Act* and permitted the MOEA and Tai-Power to do so.

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<sup>161</sup> UDN News, May 24, 2007.

<sup>162</sup> UDN News, June 6, 2007.

According to the *EIA Act*, there was an obvious difference between “rejection” and “withdrawal.” Once the EIA report from industrial plan was finally “rejected” by the EIA committee, it meant the plan could not proceed in any form unless there was a new design. However, with a status of “withdrawal”, this case could return to the EIA committee at any time if the developers were ready to give a shot. Presumably, a “rejected” case could not be withdrawn; otherwise the EIA review would be meaningless. Nonetheless, the EPA still approves this withdrawn, which made the first case of “withdrawal after rejection” in the history of EIA.<sup>163</sup> The intension of the MOEA to withdraw the application was quite clear. What they had in mind was that, with a new EIA committee newly formed in August, there would be much better chances for most cases, like the FSP plan, to pass the EIA review.

After the MOEA and EPA delayed existing agendas, the second step for the new EPA director, Chen Chongxin, was to ensure that the new EIA committee would make distinctive “progress.” To achieve this goal, the “trouble makers” ought to be excluded from the seventh-term EIA committee. According to the *EIA Act*, the EPA director was authorized to appoint the “selection committee,” the new director therefore had the privilege to influence the final list of EIA committee members. In August 2007, without surprise, the five former committee members coming from

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<sup>163</sup> UDN News, June 15, <http://udn.com/NEWS/NATIONAL/NAT1/3889143.shtml>



environmental groups were removed off the committee.

After the change in EIA personnel, the MOEA started promoting the FSP plan in the new committee. In the EIA session in October 2007, the EPA called for an unprecedented pre-session, for the EPA claimed “most members were newly appointed.”<sup>164</sup> During the session, the CEPD representative suggested that the previous reviews made by the EIA committee member last term on the FSP should be voided, since the composition of the EIA committee had changed greatly. He then suggested that, instead of having this plan to enter the endless robust review, the EIA committee should start a brand new review on the FSP case. This statement proved that the DPP administration had a clear plan to take advantage of administrative expediency and manipulated the EIA process.

With MOEA’s strong solicitation, the new EIA committee decided to go along. In this pre-session, the new EIA committee overruled the previous decisions made by the last EIA committee and decided that the FSP could skip the two-step (robust) EIA review. The environmental groups and local oyster farmers thus launched a series of protests against this cursory decision. This strong local resistance forced the EIA members eventually to conclude that the FSP might have to go through the robust review. One month later, the EIA committee decided that the FSP plan had to go

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<sup>164</sup> <http://www.coolcloud.org.tw/node/10996>

through the robust review any way, which meant it would take one year or longer to begin its construction. Particularly, the EIA committee asked the Formosa Group to conduct “sufficient communication” with local residents before sending further updated EIA proposals,<sup>165</sup> since this company only communicated with local political factions without being accountable to communities.

### **Transparency: A Black Box**

Before August 2007, all concerned stakeholders were allowed to participate in the EIA meetings in groups, though there were still some restrictions on their auditing status. After removing the “trouble makers” off the new EIA committee, the new EPA director, Chen, also amended the administrative codes of EIA meeting. The purpose of this amendment was to “facilitate” the review process through limiting the participation of civil groups into the meeting and through blocking information from releasing to the public. While this amendment served the name of “protecting the expert’s independence from auditing body”, the affected local communities were deprived of the chances in participating policy process. The changes were as follows:

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<sup>165</sup> UDN News, November 30, 2007.

**Table 3.3 the Changes of Auditing Rules in the EIA in 2007**

<b>Policies</b>	<b>Chang (before August 2007)</b>	<b>Chen (after August 2007)</b>
<b>Numbers of review session</b>	<b>7 the most</b>	<b>3 the most (plus 1 if necessary)</b>
<b>Supplement of Data</b>	<b>N/A</b>	<b>Has to be completed in 30 days.</b>
<b>Audio Taping</b>	<b>No Limit</b>	<b>Only EPA staffs are allowed</b>
<b>Public Participation</b>	<b>30 the most</b>	<b>20 the most</b>
<b>Chairmen of sub-committee</b>	<b>Elected from committee members</b>	<b>Assigned by the EPA director</b>

Source: Commercial Times, August 11, 2007

In September 2007, a journalist intended to film the EIA review process on the FSP plan because the EPA kept the voting process under secrecy. She was soon banished from the EIA conference room and was announced as “unwelcome person” of the EPA. In October 2007, the EPA also initiated a draft of “Operational Codes on Auditing in the EIA” and set a stricter standard on auditing public. Some articles were seriously violating citizen’s rights of information and participation. Most import of all, according to this draft, the EPA could hold the right against all participating groups and media, since the EPA possessed the right to decide whether to open the EIA meeting to the public. In this black box, even the media was also deprived of their rights to report and to film the discussion in the EIA committee. These new rules illustrated that the EPA had treated civil groups, media and local communities as

troublemakers, and decided to limit them from “intervening” the policy process. This arbitrary action induced widespread criticism, since it fundamentally violated the principle of EIA reviews.

**Table 3.4 the Draft of Operational Codes on Auditing in the EIA in October 2007**

	New Restrictions
General auditing	In a separate auditing room. Auditing groups can only watch images on the TV with no sounds.
Participation	A. Only one person can be invited to present in front of the EIA member per time, and the time limit was three minutes per person. The total presentation time is thirty minutes only. B. No oral presentations are allowed after first meeting.
Transparency	The EPA holds the right not to open the EIA meetings to the public when: A. The meetings were involved with business secrets of the developers, or the secrecy was requested by the developers. B. The EIA committee decided not to open them to the public. (removed in the final version)
Media	A. Journalists were not allowed to tape, film or photograph the meeting unless the chairperson approved the actions. B. All journalists have to leave during voting. C. All journalists were not allowed to clearly mention the names of the EIA members and their personal opinions. (removed in final version)

Source: Compiled by the author

In Feb 2008, the EPA announced the final version of the “Auditing Codes.” Although the EPA made some revision after a series of protests launched by journalists and civil groups, most of the restrictions related to the auditing still applied on civil participants. While the investor could participate into the EIA meetings as an

applicant, local communities and environmental groups found themselves very remote from the EIA decision-making process. As the media and concerned public were considered as impediments of EIA reviews, this threshold thus blocked public participation.

Owing to this black box decision process, the media coverage of EIA news on the main media had decreased since then. Although the FSP plan eventually stop because the Formosa Group had little intention to start it in Taiwan, the impact of limiting civil participation in the policy process was enormous. It forced the civil groups to re-emphasize the significance of social activism and to adopt a more radical approach. The activists began to look for another battlefield in resisting state's actions. In the following two chapters, the author will describe the consequence when civil groups gained experience in fighting against the state.

## **Conclusion**

In conclusion, some features could be drawn from the Taiwan's FSP plan:

First, though penetrated by the business interests, the Taiwan state had remained autonomous in shaping industrial policies. The techno-bureaucrats preserved their saliency in persuading the politicians in driving more development based on previous patterns.

Second, with democratic transition, the penetrative capacity of Taiwan state into

the industrial sector and local polities by the central state was weakened. It had caused a huge amount of uncertainty in establishing new national plans.

Third, while the legacy of developmental state still existed, the state bureaucracy was obsessed with previous developing patterns. They tended to promote capital-intensive plans in stimulating the GDP, but failed to evaluate the market efficiency of the FSP plan. The rational calculation was compromised by their political intention in increasing domestic capitals. The political leaders and techno-bureaucracy found their common grounds on this capital-intensive investment, while this investment may seem less cost-effective.

Fourth, the emerging deliberation and public monitoring through EIA reviews was proven significant in delaying inefficient FSP plan. Although the legacy of authoritarian developmental state rendered the state less tolerant in coordinating different agendas in democratic regime, the state's attempt in evading monitoring from public and checking mechanisms, though revealed state's previous unaccountability in promoting the FSP plan in an arbitrary way, eventually triggered more local resistance. This coercive self-examination contributed a more comprehensive and responsible review of state's policy on the steel sector.

The FSP plan was a starting point for the Taiwan state to engage with the public through a deliberative institution. However, the politicians and bureaucrats found the

state apparatus incapable to remain efficient in front of public checks or local resistances brought by democratic transition. Therefore, the politicians decided to shut the policy door from the public. This retrogress in democratic transition proved that the Taiwan's developmental state was forced to adapt, though the legacy of developmental state render the state more inclined to adopt a undemocratic measure to solve the problems occurred in a democratic regime.

However, owing to the deliberative attempts from civil groups and EIA members, the Formosa Group eventually dropped this inefficient plan while expecting a long fight in the EIA ahead. At the end of 2007, with the swinging situation in the EIA reviews on the FSP plan, the DPP high-ranked officials asserted that the pressure from environmental groups was "very huge," and the administration had expected a much longer battle for the FSP plan.<sup>166</sup> In other words, it was the civil participation through the EIA review, though limited by the state, helped to correct the policy flaws made by the state.

The resistance from environmental activist and local communities either within or outside the EIA channel was proven significant when the state decided to intervene for the EIA reviews. The challenges against the FSP plan eventually led to a comprehensive industrial policy EIA on the steel industry, because the MOEA was

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<sup>166</sup> Commercial Times, November 30, 2007.

forced to formulate an EIA report on a policy scope. The PERSI report filed by the MOEA in 2010, although was still criticized by the civil groups, later proved that building a grand-scale FSP was not Taiwan's optimal choice. In contrast, a structural change in this sector may be a more important direction to go.

That suggested that the previous developmental state had its limit while new kinds of development were emerging, especially when democratic transition had undermined the state's control on local politics and private sectors. Due to the intention to control capital, the state render itself enthusiastic in promoting capital-intensive programs such as FSP with less concerns on economic efficiency. It was the civil participation and institutional monitoring complementing the "vacuum of deliberation and accountability" of developmental states.



## **Chapter 4 the Central Taiwan Science Park:**

### **the Holi and the Erlin plans**

#### **Introduction**

Taiwan's LCD industry started at 1997 by receiving technical assistance of Japanese corporations, and emerged as a key sector in Taiwan during this decade. This sector in Taiwan has consisted of more than forty percent of the total LCD production in the global market. In the 2008 financial crisis, Taiwan's LCD sector was seriously hit by global economic recession. In order to overcome the problem of oversupply, most LCD enterprises in Taiwan believed that migration to China was an inevitable resolution, for China has increasingly become the biggest market of LCD products.

To reduce the production costs, the LCD sector in Taiwan has gradually increased their investment in China in the past decade. According to Taiwan's law, the capital outflow to China was an issue of national security, and therefore the Investment Review Committee (IRC, a coordination platform among government agencies) must review it. Because TFT-LCD industry was a strategic sector in Taiwan's economic plan, Taiwan's LCD industries were only allowed to set up assembling facilities, which was less associated with technical innovation, in China.

Any other direct investments of the LCD sector in China were prohibited by the Taiwan state before 2010.

According to the research from the Industrial Economics and Knowledge Center (IEK), the growth of the LCD TV market in China was estimated to reach 45.7% from 2006 to 2011.<sup>167</sup> To meet this grand demand, China has already started to develop its own LCD industry. Korean LCD corporations, which are the top competitors of Taiwan's LCD industry, also began their industry migration into China in 2009. Therefore, the domestic LCD providers in Taiwan have constantly requested the government to lift the ban, since they planned to make new investments in China to keep up with their Chinese and Korean competitors. They asked the government to approve their direct investment by directly establishing brand new supply chains in China. Due to the great pressure from this industry, the Taiwan government finally opened a window. The LCD industry was allowed to send applications of their cross-strait investment plans to the IRC after February 2010. The biggest LCD firm in Taiwan, the AU Optronics Corporation (AUO Group) thus delivered the first cross-strait investment initiation in Kungshan, China.

Due to urgent pressure of capital outflow, the Taiwan state launched an "N-1" policy to make sure that the government could keep a number of private capital and

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<sup>167</sup> [www.itis.org.tw/rptDetailFree.screen?rptidno=591362006](http://www.itis.org.tw/rptDetailFree.screen?rptidno=591362006)

the latest technology of this sector in Taiwan. The primary goal for the MOEA's "N-1" doctrine was to ask those migrating firms to establish more advanced facilities in Taiwan before their investment in China could be approved. This would assure that the LCD industry in Taiwan would always lead "one generation gap" on technology innovation. However, it was quite inefficient to disperse manufacturing facilities in Taiwan AND China; furthermore, this "safe deposit" may take three or four years to be realized. The huge cost of time may lessen the capability of Taiwanese firms to embrace this emerging Chinese market.

In order to legitimize the AUO's capital migration to China, the Taiwan state reached an agreement with the AUO. The AUO had to conduct sufficient domestic investments in Taiwan before they could start their Kungshan plan in China. To meet AUO's demand, the state thus set up two industrial plans in central Taiwan, allowing the AUO to conduct necessary "safe deposits" in Taiwan before they could leave. However, this haste policy meant to customize for the AUO neglected the environmental capacity and local livelihood in the designated sites. Both cases thus encountered huge challenges in the EIA and the APC reviews, for the external costs may be beyond the possible gain brought by both industrial plans made out of political compromises.

Although the political leaders exerted political intervention and eventually

succeeded in evading the monitoring from the checking mechanisms, civil groups still filed a series of administrative lawsuits for the state's failing to be accountable to the monitoring institutions. Despite that the state fought against the court from 2007 to 2010, the final court order from the Supreme Court in July 2010 clearly commanded the state to stop both plans. The state was obliged to lift the ban in a faster pace, since the state seemed incapable of saving the AUO's capital by offering supporting industrial plans. In December 2010, the Taiwan state approved the AUO's Kungshan plan. Although the AUO still promised to continue their investment in Taiwan after Kungshan plan started, the nature of the developmental state seemed to be forced to transform in this event.

### **The Nurturing Period: The AUO and the Holi-Chixing plan**

In 2003, the AUO one of the top producers of TFT-LCD panels, planned to establish new facilities inside the Central Taiwan science park (CTSP). Because the AUO has been a giant in the sector of advanced optoelectronics, the MOEA and the CTSP management unit were keen to invite the AUO to expand their production in the CTSP. This new expansion was referred as the second expansion (also called "the Third Period" of CTSP). Because this expansion mainly operated on two different farmlands (Holi and Chixing), this expansion was also called "Holi-Chixing plan." This plan was a huge project with up to 246 operating hectares of land needed. The

state-owned Taiwan Sugar Company (TS afterwards) owned most of the lands.

In 2002, the DPP administration delivered a grand national development plan: “Two Trillions, Twin Stars,” (TTTS) stating the government’s intention to support four industrial sectors: semi-conductors, TFT/Panels, biochemistry, and digital contents. The goals of this plan are to increase investment amount to “two trillions” NT dollars in 2006 for the former two sectors, and to develop the latter two as “star sectors” in the future. To reach this goal, it requires huge investment from local enterprises.

Owing to the governmental patronage, the investment of the AUO climbed up to an amount of 0.2 trillion NT dollars, which made the AUO the most prominent role in the CTSP in 2003.<sup>168</sup> From 2002 to 2005, the TFT/Panel industries financed 0.6 trillion NT dollars from Taiwan’s banks. The DPP administration also asked the banks to continue their loans to the TFT industries even during financial difficulties in 2005.<sup>169</sup> The fact showed the DPP’s intention in developing TFT Panel/LCD industries during their term. By persuading the banks to grant huge loans to these industries, the DPP was aimed to fortify this new star sector wielding its political influence.

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<sup>168</sup> Data from MOEA, <http://w2kdmz1.moea.gov.tw/user/news/detail-1.asp?kind=&id=6665>

<sup>169</sup> New Taiwan, Vol 473. <http://www.newtaiwan.com.tw/bulletinview.jsp?bulletinid=21798>

**Table 4.1 Four Goals of TTTS regarding the TFT Industry**

	Goals of TTTS	Results
1	Taiwan as the biggest supplier in the global TFT market	Top 1 since 2007
2	Taiwan as the major developer in the TFT technology	Considered done
3	The output value of the TFT industry reaching 1.37 trillion NT in 2006	1.64 Trillion NT in 2007
4	The private investment in the TFT industry reaching 0.35 trillion NT through 2002 to 2007	Totally 1.4 trillion NT during 2002 to 2007

Source: Data compiled by the author<sup>170</sup>

In 2006, the AUO planned to build a 7.5<sup>th</sup>-generation (changed to 8.5<sup>th</sup>-generation later) plant in Holi-Chixing to increase their market share. The rationale behind the Holi-Chixing plan was to boost the AUO's productivity to decrease the average costs of LCD products. This expansive policy resulted from a price war between Taiwan and Korean occurring in 2005 and the outlook of a constant global economic boom.

On account of the significance of the LCD sector in Taiwan, the MOEA and the National Science Council (NSC, which was in charge of science parks<sup>171</sup>) soon approved this investment. In order for the developer to realize this investment, they still required (1) the construction license issued from local counties; (2) the approval of the EIA and the APC reviews. The former was highly associated with the state's

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<sup>170</sup> New Taiwan, Vol 631, <http://www.newtaiwan.com.tw/bulletinview.jsp?bulletinid=78839>

<sup>171</sup> In Taiwan, science parks are considered science-related issues and therefore are under the operation of the NSC. Despite the commercial characteristics of science parks, the establishment of a science park is associated with the state's investment. (ex: economical rents and low taxes for certain business sectors.) In this case, the establishment of the CTSP was related to the NSC and CCP (Committee of Construction and Planning) based on the potential of incoming investments.

capacity to penetrate into local politics, and the latter was a task examining the state's capacity in terms of deliberation and accountability.

While local leaders in both Taichung and Zhanghua county were very enthusiastic in inviting the AUO's capital into their borders, the checking reviews from the APC and the EIA committee turned out to be critical to the possibility of the realization of these industrial plans, for both institutions were set to examine the external costs and opportunity costs possibly produced by these industrial plans.

A series of disputes on environmental and area planning then were aroused because of the huge potential health risks and unjust rules of land acquisition.<sup>172</sup> Local farmers were suspicious about these developing actions, particularly because of the AUO's previous unsatisfactory records on environmental protection. Besides, the local farmers and activists used the social justice issue brought by land acquisition as leverage to rally against these plans.<sup>173</sup> In addition, the EIA committee during 2005 to 2007 included some prestigious environmental activists and therefore possessed higher autonomy. This strong monitoring mechanism has conflicted with the state's

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<sup>172</sup> Both farmlands were located in the upstream of Daan River and Dajia River, two primary rivers nurturing the agricultural lifestyle in central Taiwan. Therefore, the adjacent area was highly ecologically sensitive. The introduction of TFT-LCD industries into this area can be a very controversial decision, in the regard of protection of ecology and the agricultural sector.

<sup>173</sup> There was a justice issue behind land acquisition. The Taiwan government can acquire private lands coercively by law. According to *Taiwan's Land Acquisition Act*, the acquisition of private lands can be done only for "public interests." However, the objective of the creation of the CTSP was in dispute, since the establishment of the CTSP can be theoretically irrelevant from public interests. After all, the government was planning to handover the land to a corporation. Although the local county has the power to proceed the land acquisition, this action is hardly a legitimate mean under the name of "public interests."

intention to nurture this sector. Therefore, the EIA became the biggest battlefield for this investment.

Under Premier's Su's strong intervention, the EPA held five review meetings consecutively during the course of three months in 2006. With a series of political interventions and some political uproar, the EIA committee finally approved these plans. Some EIA members resigned from their positions and delivered an announcement to the public claiming that "the EIA review was dead," condemning the DPP's intervention to independent reviews.

This arbitrary administrative intervention not only triggered serious antagonism between the DPP government and environmental groups,<sup>174</sup> it also brought about unfavorable outcomes for the state developing this industrial sector in the future. After losing battles in the EIA, environmental groups filed a civil lawsuit to Taipei's administrative court accusing the state failing in conducting necessary assessment on health risks probably caused by TFT factories in the Holi-Chixing plan.

In January 2008, the Taipei court ruled that the EIA review made in 2006 was incomplete since the assessment of health risks of local communities was ignored. Therefore, the court rescinded the conclusion made by the EIA committee in 2006

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<sup>174</sup> When this review was over, some committee members resigned, and some of them announced that the "EIA was dead." They put blames on the EPA head Chang, and Chang even filed a lawsuit against one of the environmentalists for this comment.



and demanded the committee to review the case again.<sup>175</sup> Following the spirit of this verdict, the previous permission granted to the developer to start Holi-Chixing plan was also invalid.<sup>176</sup>

In other words, according to the court order, the administration may need to stop the construction in Holi-Chixing until a robust review suggested that these activities were safe. **This was the first lawsuit case in the Taiwan history that environmental groups successfully stopped the construction project through legal system.**

By the moment the court made the order in 2008, the AUO has not conducted massive construction activities in Holi. If the EPA had put a stop on the developing actions, the Holi-Chixing could have been stopped immediately with fewer costs expensed. However, the EPA decided to appeal in 2008.<sup>177</sup> The appeal took another two years, which allowed the AUO to proceed the construction for another two years.

### **Limiting the Capital Outflow: the Erlin plan**

The TFT sector in Taiwan has grown as the top leader globally in 2007, while the Korean companies reclaimed the title since 2008. The competition between

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<sup>175</sup> The judge maintained that, according to the Article 14 in EIA Act, the second-step (robust) review might be needed if the EIA members considered that there was a public risk concern in the development activities.

<sup>176</sup> The Article 14 in the *EIA Act* says: “*The industry competent authority may not grant permission for a development activity prior to the completion of an environmental impact statement review or the authorization of an environmental impact assessment report; permission granted in violation of this regulation shall be invalid.*”

<sup>177</sup> The EPA claimed that they had done appropriate measures because the court decision was not final in 2008.

Taiwan and Korea has been particularly intense, with China chasing behind. The investment from the DPP administration in the TFT industry paid off, but the cost was also extremely high in the 2008 crisis.

With China's rapid economic growth, it appeared a potentially huge market for LCD products. The AUO has conducted a series of medium-sized investments in China since 2001, and it determined that the Chinese market had gained its salience after the global financial crisis in 2008.<sup>178</sup> The Topo Research Institute has indicated that Taiwan's LCD productions can manage to consist of 34% to 37% of the global market share "only if" they start to migrate to China. Otherwise, Taiwan's LCD sector will soon be marginalized by Korean competitors.<sup>179</sup>

Responding to the trend of capital migration worldwide, the Taiwan state seemed to be forced to open the opportunities for Taiwan's LCD enterprises to "go west." However, the state demanded the developers to conduct investment in more advanced facilities before investing in China. The MOEA thus facilitated the CTSP's third expansion, trying to leave some of the AUO's investments in CTSP before their migration.

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<sup>178</sup> The Chinese market only consisted of less than ten percent of the AUO's sales of LCD products before 2008, but it started to surpass twenty-five percent after 2008. Wang News(旺報), January 29<sup>th</sup>, 2010.

<sup>179</sup> Marbo Magazine. [http://estock.marbo.com.tw/asp/board/v\\_subject.asp?BoardID=&ID=5608709](http://estock.marbo.com.tw/asp/board/v_subject.asp?BoardID=&ID=5608709)

**Table 4.2 the History of the CTSP**

The Evolution of the CTSP	Starting Year	Locations
The Original CTSP	2003	Xitun, Taichung City
The First Expansion	2004	Daya, Taichung County
The Second Expansion	2006	Holi-Chixing, Taichung County
The Third Expansion	2009	Erlin, Zhanghua County

Sources: Compiled by the author.

Again, after the MOEA approved this investment, the local counties did not seem to be obstacles implementing the state's policies, since most local political leaders all showed their enthusiasm in welcoming this high-tech, capital-intensive investment.<sup>180</sup> As the AUO's preferred Erlin (in Zhanghua County) as its industrial base, it was chosen as the planned site for the CTSP's third expansion.

However, the history repeated itself in 2008. Because Erlin was also characterized for its fine agricultural production and ecological weakness, similar battles thus occurred in both the APC and EIA committees. Given the highly controversial environmental risks and assertive protests from the local farmers, the EIA review on Erlin encountered stagnancy after six sessions. Normally Erlin plan would have to go through a second-stage EIA review, since the EIA member failed to reach agreements. However, in October 2009, the new Premier Wu decided to ensure the passing of the EIA review of the Erlin plan by the end of 2009. With strong coercion manipulated by the Premier, the EIA committee did approve this case by the

<sup>180</sup> Epoch News, August 16, 2008. <http://www.epochtimes.com.au/b5/8/8/15/n2230134.htm>

end of 2009, while with nineteen conditions for the AUO to follow. Just as what they did in dealing with the Holi-Chixing case, this time, environmental activists also filed a lawsuit.

In February 2010, the Taiwan Supreme Court officially overruled the EPA's appeal on Holi-Chixing case and concluded that the EIA's decision on Chixing was invalid and needed to be rescinded. In July 2010, the Supreme Court gave a clear order that both Holi-Chixing and Erlin plans must be stopped since the EIA committee failed to conduct necessary reviews to complete this procedure. Although the EPA and the CTSP office tried to fight against the Supreme Court, the court order has created a crisis for the AUO: If the AUO could not complete the domestic investment in time, their migration schedule will inevitably be delayed. However, the clock was ticking for the AUO, since there were only two licenses on high-generation LCD manufacturing lines left issued by the Chinese government.<sup>181</sup> The AUO thus revealed great grievances against the system's inconsistency. In December 2010, the European Union fined the AUO and the Chimei, the top two LCD enterprises in Taiwan, because they violated EU's *Anti-Trust Act*. The difficult situation of the LCD sector induced the state to lift the ban in a faster pace.<sup>182</sup> In the same month, the Taiwan state announced that the AUO was allowed to start their Kungshan plan in

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<http://www.topology.com.tw/release/releasecontent.asp?ID=QFTGB4A1X5429NV54G6QH72JL4&sKeyWord=%A6%E8%B6i>

<sup>182</sup> Economic Daily, August 5<sup>th</sup>, 2010.

China, while the state expected the AUO's investment plan in Holi-Chixing and Erlin still be realized.

### **State's Autonomy**

Throughout the last decade, the LCD sector has been the star sector in Taiwan. The state's support of the LCD sector basically came from the previous legacy of the developmental state. Under four years of cultivation, this sector soon grabbed forty percent of the global market share in 2004 and remained strong ever since. In the initial stage of its development, the state exerted their political influence to give huge loans to this sector, provide inexpensive rents and credited tax bonus to this sector, due to its "high-tech" feature.

With the end of the disastrous economic crisis in 2008, the market price of TFT Panels finally rose up enormously in 2009, mostly because China delivered an "electronics into the countryside" plan. This plan buffered the over-production pressure in the TFT sector in Taiwan and Korea and saved this sector from self-destruction. To put it more clearly, since the TFT/LCD market in developed countries has nearly been saturated, the new needs in rural China became an effective remedy for this sector. With the fast growing needs in TFT/LCD products in China, it was reasonable and rational that the TFT sector in Taiwan was eager to move their operation centers and manufacturing bases across the Strait. For the AUO, the market

in China appeared to be increasingly important; therefore, a large-scaled industrial migration to China is foreseeable.

**Table 4.3 the Ratio of the Chinese Market in the AUO’s Profit Structure**

2008	2009	2010	2012
3%	25%	30% (estimated)	The Biggest market

Source: the AUO Corporation

In mid-2009, the AUO has spread the news that they would establish three new facilities in China. At the same time, the TFT sector singled out that “migrating to China” was an inevitable tendency in the future. In February 2010, following the trend, the AUO became the first TFT company to apply for the cross-Strait investment plan (the Kungshan plan in China), on a facility producing the 7.5<sup>th</sup>-generation TFT Panels (the same facility as in the Holi-Chixing plan).

In Taiwan, all grand-scaled investments from Taiwanese companies to China have to be approved by the Investment Review Committee (IRC). The IRC would make decisions based on the characters of that particular sector and the technology level of the facilities that the company would establish in China. Due to the fear of losing capital to China, the investment in high-technology products in China has always been a sensitive issue both politically and socially.

The AUO urged the state to lift the ban without setting up any limitation on the technology gap between different facilities across the Strait, since the AUO supposed

that migration to China was the most possible survival strategy for Taiwan's TFT sector. At the same time, the Taiwan government also realized that the requests of Taiwan's TFT sector were pragmatic, since grabbing the Chinese market and excluding competition from Korea and the Chinese TFT industry would be very crucial to Taiwan's TFT sector in the future. Viewing the fact that the Korean government began approving Korean TFT sectors for starting investment in China, and that China had started to nurture its own LCD industry, the Taiwanese government acknowledged that this "west-forward" move was inevitable.<sup>183</sup>

The government then announced that the ban on Taiwanese TFT companies' migration to China could be lifted only if these corporations promised to invest in better facilities and technologies in Taiwan. In order for the AUO and other TFT corporations to invest in China, the investors must meet two criteria: (1) no more than three new facilities can be established in China at a time, (2) there must be at least one generation gap between the newest facilities in Taiwan and the ones in China.<sup>184</sup> The latter was called "N-1 policy." This deal can be considered an exchange of interests between the Taiwan state and the TFT sector.

The AUO's president, Lee, admitted that the Erlin plan was a bargaining chip, for the government's top concern was to keep domestic capital and technology

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<sup>183</sup> China Times, February 10, 2010.

<sup>184</sup> <http://news.cts.com.tw/cnyes/money/201002/201002260417509.html>

advantage in Taiwan during the LCD sector's migration to China. In March 2010, the spokesperson of NSC also admitted that the goal of the Erlin plan was to echo the policy "Leave the Roots in Taiwan<sup>185</sup>," which was to prevent private investment from flowing to China. In other words, **the government's intention in bolstering Holi and Erlin plans may be associated with the state's intention to control domestic capital from overwhelmingly fleeing to China.** Therefore, both the Holi-Chixing and Erlin plans stood for a reciprocal optimal point for the Taiwan state and private investors in the negotiation of capital outflow.

While the Premier Wu and the MOEA requested that the AUO fulfill its commitment, by launching the Erlin and Holi-Chixing plans in Taiwan, both plans needed the EIA's approvals. The state realized that if these plans were held due to the gridlock in the EIA or the judicial system, the government would run out of bargaining chips negotiating with the AUO. This will also further legitimize a series of potential migration decisions of Taiwan's LCD companies to China. Therefore, the Taiwan state was anxious in excluding environmental concerns from the decision process in order to allow the Erlin plan to begin as soon as possible.<sup>186</sup> This anxiety

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<sup>185</sup> Central News Agency, March 16, 2010, <http://www.cna.com.tw/ShowNews/Detail.aspx?pNewsID=201003160199&pType0=aALL&pTypeSel=0>

<sup>186</sup> Although the cash inflow of Taiwanese corporation to China requires the approval of IRC; the fact is that corporations can sometimes evade these rules by exploiting loopholes, such as setting up a new company registering overseas or seeking for alliances with Chinese enterprises. The Taiwan government, nonetheless, can pick on certain big enterprises in certain occasions if politicians determine to punish the corporations, which "smuggle" their capital into China. This sort of punishment happened several time during the DPP's term since the DPP constantly held a more



to control capital contributed to the state's zealous support of the CTSP's expansion.

Within 2010, the AUO's investing project in China, estimated three-billion USD, was rejected by the MOEA twice, for the MOEA claimed that the AUO had been vague about its preliminary investment in Taiwan. The MOEA suspected that the AUO was actually using the Erlin plan as a stepping-stone to China without making credible pledges on investment in the Erlin plan. The Taiwan state would like to make sure that the AUO had made most of the deal, since the state understood that the AUO's top goal was their market in China. It was very likely for the AUO to make a fake promise in Erlin in trade of a free pass to China.

In fact, some found it likely that the AUO "bluffed" on the Erlin plan, because the AUO removed its business branch in Erlin after the MOEA's official approval of the Plan. The rumor inside the TFT sector indicated that the AUO channeled its resources to China, focusing on setting up their China branch. There was no recruiting based on future facilities in Erlin undertaken, and the company showed few interests in starting the Erlin plan. Rather, the AUO paid more attention to preparing for migration in 2010 even when their Kunshan Plan in China was still on hold.

Although the AUO often claimed that they would have the facilities finished as soon as possible, they did not make great efforts in getting the new facilities in

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conserve and more hostile attitude against China.

order. After delivering the application, the AUO re-arranged the agenda and the staff in 2010. The construction in Holi-Chixing was on hold, and the Erlin plan was even removed from the main agenda of the company<sup>187</sup>. The AUO group seemed to put most of their efforts on the expansion in China rather than to continue both plans in Taiwan.

When questioned, the AUO appeared very reserved on the operation of the Erlin plan. In March 2010, the AUO announced that the construction in Erlin, “would not happen this year, and maybe next year to the soonest. We will see!”<sup>188</sup> In fact, far from one year earlier, the AUO has already indicated that the AUO would delay the construction of Erlin facilities for from six months to one year.<sup>189</sup> That means the AUO did not plan to proceed the construction anytime soon.

The Taiwan state was also aware of the intention of the AUO. In July 2010, the vice Director of the MOEA, Huang, claimed that the AUO needed to “clearly understand that the original 12.5 billion investment the AUO promised to offer could not shrink” before the state would lift the ban on capital migration.<sup>190</sup> The AUO had to comply with the government’s terms and submitted a new plan which included the construction of four 10<sup>th</sup>-generation plants and two 11<sup>th</sup>-generation plants, plus two

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<sup>187</sup> It was based on the interview to the employees in the TFT sector.

<sup>188</sup> Economic Daily, March 18, 2010.

<sup>189</sup> Commercial Times, January 22<sup>nd</sup>, 2009.

<http://tech.chinatimes.com/2007Cti/2007Cti-News/Inc/2007cti-news-Tech-inc/Tech-Content/0,4703,12050902+122009012200348,00.html>

<sup>190</sup> <http://big5.huaxia.com/tslj/qycf/2010/07/2002016.html>

solar power plants. The amount of these new investments will cost the AUO totally 17 billion USD in the CTSP Erlin plan. Although the AUO has made a huge compromise, the MOEA was still very reluctant to approve this resolution, since there were no agreements on the feasibility of these plans.

In December 2010, the AUO and two other Taiwanese TFT corporations were fined by the European Union because of their violation of the *Anti-Trust law*. As a result of this “cold winter” of Taiwan’s TFT sector brought by EU’s heavy fine, a notable TFT entrepreneur in Taiwan criticized the Taiwanese government for their slow response to the EU’s anti-trust investigation. To alleviate the pressure from the TFT sector, the state finally approved the AUO’s migration plan, because the legal problem of EIA review for the Erlin plan had kept the AUO from starting their plans in time. In order to stand along with the TFT sector, the Premier and the MOEA decided to settle with the AUO’s final plan and let it “go west” to China.

**Table 4.4 Timeline of the AUO's Application for the Kungshan plan**

2010. 03.	The AUO sent the application for building two 7.5 <sup>th</sup> -generation LCD facilities in Kungshan, China. The investment amount was estimated around three billion USD. This was the first cross-Strait application in the TFT sector.
2010. 04.	The MOEA requested the AUO to clarify their preliminary investments in the CTSP.
2010. 06.	The IRC considered that the object of the AUO's investment in Taiwan unclear and asked the AUO to suffice the terms.
2010.08.	The AUO promised a bigger plan in the CTSP: Two 11 <sup>th</sup> -generation plants and two solar power plants would be built.
2010.12.	The AUO was fined by the EU.
2010.12.	The IRC approved the AUO's Kunshan plan.

Source: Compiled by the author.

For the Taiwan state, this deal may help to preserve most of the AUO's capital and its most updated technology in Taiwan. However, the state's delaying capital outflow may cost Taiwan's TFT sector a preemptive status within the competition in the Chinese market. From the AUO's view, Holi-Chixing and Erlin plans were just stepping-stones on its way to the Chinese market. Starting new prospects in China would as soon as possible would give the AUO a far better opportunity to grasp the new Chinese market since its Taiwanese opponents were forbidden to migrate identical technologies to China.<sup>191</sup> By limiting the AUO's capital mobility, the state succeeded in showing their autonomy in regulating the powerful TFT sector.

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<sup>191</sup> For an example, the AUO's top competitor in Taiwan, Chimei, was only allowed to set up 6<sup>th</sup>-generation facilities in China. That gave the AUO an advantage to stand a more competitive position.

## **State's Penetrative Power**

Like in other major industrial projects, local factions and political strongmen also played a role in these CTSP struggles. However, it was very fortunate for the state in the CTSP case since most local counties in central Taiwan appeared very positive toward these development plans.

## **Weak Penetration to Local Politics and the Myth of Science Parks**

Earlier in 2004, the head of Taichung County, Huang Zhuongsheng started to show his interests in having the CTSP expanded in Holi. Through 2004 to 2006, Huang was keen in competing for the CTSP's second expansion and promised that the Taichung County would clear out all obstacles by May 2005. To compete with his counterpart, the head of Zhanghua County, Zhuo, has also been zealous in having the third expansion of the CTSP settling in Zhanghua. Both counties had to compete with five other candidate sites in the selection process. Both county heads promised to tackle all the local administrative measures and to make their counties sites that are more suitable for the corporations.

Both Huang and Zhuo considered the CTSP's expansion crucial points for their counties' prosperity. In 2006, fearing that the Holi-Chixing plan might encounter environmental gridlocks in the EIA review, Huang decided to defend the Holi plan in

the EPA.<sup>192</sup> Huang argued that the initiation of the Holi Plan would effectively reduce the unemployment rate in Taichung County.<sup>193</sup> Likewise, Zhuo also endeavored to promote the Erlin plan.<sup>194</sup> When the Erlin plan faced challenges in the EIA review, Zhuo paid visits to different agencies to make sure that this case could come through. He not only repetitively urged the Premier to facilitate the process, but also visited the CEO of the AUO, Lee, to stabilize this major developer.<sup>195</sup>

In fact, Huang and Zhuo were not the only county heads that never doubted about the benefit of having high-tech industries within the county borders, and the state also has paid for that myth. To be more concise, the establishment of science parks was managed by “The Developing and Operational Fund for the Science Parks” in the NSC. However, due to the continuous spending on the construction plans of science parks in rural counties during 2000-2008, the funds were in deficit up to 0.112 trillion NT dollars in 2009. Furthermore, the NSC still expected to have another debt of 7.3 billion NT dollars in 2010. According to an estimate from the EIA members, the government had to pay 0.2 billion NT dollars for each acre of land providing to the developers, not yet including the interests generated from the debt (up to 3 billion per year<sup>196</sup>). However, the usage of science parks was not well-planned and thus not

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<sup>192</sup> UDN News. [http://pro.udnjob.com/mag2/it/storypage.jsp?f\\_ART\\_ID=24806](http://pro.udnjob.com/mag2/it/storypage.jsp?f_ART_ID=24806)

<sup>193</sup> The CTSP website. [http://www.ctsp.gov.tw/kids/06ctsp/06\\_a\\_main.aspx?sn=113](http://www.ctsp.gov.tw/kids/06ctsp/06_a_main.aspx?sn=113)

<sup>194</sup> Premier Liu said that during his tour in Erlin Site.

<http://www.eycc.ey.gov.tw/ct.asp?xItem=44345&ctNode=1096&mp=1>

<sup>195</sup> Economics Daily, September 19<sup>th</sup>, 2009.

<sup>196</sup> New Taiwan Magazine, “EIA Was Silenced in CTSP,” Vol 524, April 06, 2006.

necessarily cost efficient. For example, there were still two science parks (in Yilan and Tonlou) waiting for their first clients.

The chairman of the NSC, Lee Luochuan, stated that the establishment of the science park could be very manipulative in the decision-making process. According to him, there were consistent interventions from Premiers and Presidents in the planning process of science parks.<sup>197</sup> Therefore, the professionalism in site selection was sometimes overwhelmed by political concerns, mostly because of local demands for having their own science parks. Although Lee promised to change the pattern of decision-making, the Erlin plan still repeated the previous pattern.

In the CTSP, the usage of this grand facility seemed not paying off. Up to 2010, the original and the following two expansions of the CTSP were NOT well utilized. The ratio of land usage by developers reached only 41.04%.<sup>198</sup> It indicated that the Erlin plan might not be necessary in this regard, since the funds were in great deficit and the slots in the CTSP were not full yet. Nonetheless, the CTSP claimed to the media that the land usage of the CTSP has reached 90%, and therefore the expansion to Erlin was a necessary move. However, the indicators could be manipulated by creating industrial plans that did not exist.

The myth about science parks led to the competition among local political

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<sup>197</sup> China Times, May 24<sup>th</sup>, 2008.

<sup>198</sup> From the CTSP's report submitted to the Legislative Yuan, <http://www.peopo.org/shuchuan/post/46518>. On the CTSP's website, there was only 54.95 % of land usage in the CTSP in 2009.

figures for establishing industrial projects, especially for the Erlin project. In a series of EIA reviews held in 2008 and 2009, Zhuo and most Erlin political figures always claimed that “almost 100% of the Erlin residents welcome this project.”<sup>199</sup> They treated this investment as a breakthrough to prosperity. Although environmental groups have been very suspicious about the amount of job opportunities that can be created by the AUO’s new plans, given the fact that job positions in high-tech facilities may not be available for local farmers, having a high-tech science park in the county was considered a fashion in reaching prosperity. Furthermore, job opportunities might not really be the politicians’ concern; instead, the potentially soaring value of land was.

Both the realty business circle and the county would benefit from the land appreciation caused by investment. Not only would the county impose more taxes on more expensive lands, local county heads could treat the increase of the tax revenue as one of his “credits,” showing his political performance. In fact, both Huang and Zhuo did consider the CTSP’s expansion a great achievement in their political career and continued to publicize it during the 2009 election.

### **Land Speculation by the Investing Plans**

In terms of the Holi Plan, Huang stated that the CTSP’s first expansion has

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<sup>199</sup> Taiwan Lihpao, December 28, 2009. <http://books.sina.com.tw/article/20091228/2612416.html>



brought a wave of ‘prosperity’ in Taichung County, since the land price in some areas almost doubled.<sup>200</sup> According to the “Urban Land Price Index” published by the Department of Land Administration in Taiwan, while the land price in the rest of Taichung County stayed stable through 2003 to 2007, the land price in all Holi went up extraordinarily, and the number of realty purchases in this area also grew fast<sup>201</sup>.

**Table 4.5 the Change of Industrial Land Prices in Holi (Compared with another Four Major Cities in Zhanghua)**

	March 2003	March 2005	March 2006	March 2007	Sep. 2007	Growth Rate
Holi	15927	17100	19326	21576	23679	48%
Fongyuan	26790	26263	26993	27471	27560	2.8%
Tangzhi	25938	27711	28040	27422	27476	6%
Daya	21732	24339	23795	23420	22892	5.3%
Shenggang	21544	21065	20651	19782	23679	10%

Source: <http://www.land.moi.gov.tw/filelink/uploadlink-548.pdf>

Unit: NT dollars per one square meter (1 US dollar equals to 32 NT dollars roughly)

From the statistics above, we do see an influence of the CTSP on the land price in Holi area. Even most of the land in Holi area was acquired from Taiwan Sugar, the land prices for industrial use still increased up to 50% within four years, particularly after 2006, when the Holi Plan was approved by the EIA review. Compared with other cities, the big investment seems to be a very effective way to booster land prices and shape an image of prosperity within a very short time. The effect occurred even

<sup>200</sup> It was based on the interview in the Central News Agency with Huang in 2005. September 06, 2005.

<sup>201</sup> Please refer to the *Urban Land Price Index Report* published by the Land Administration, <http://www.land.moi.gov.tw/filelink/uploadlink-545.pdf>

before the developer threw the first penny in the project, since local speculators had smelled potential business profits.

Holi and the previous CTSP plans provided examples of quick development exploited by speculators. It became a panacea for the development of poor areas. When the CTSP was planning for its third expansion, given the successful example of Holi, some political figures in rural Taichung urged the county head to have Taichung County to be chosen as the site again. The adjacent counties also strived for this cure.

The AUO's expansion cast similar spell on Erlin, too. Ever since the AUO declared that Erlin would be the site for the CTSP's fourth expansion, the price of land in Erlin area has risen in considerable rates. The director of land administration office in Erlin indicated that while realty investors showed very few interests before the CTSP's announcement, the price of farmlands as mortgage has doubled.<sup>202</sup> Because Erlin has been a relatively low-income agricultural area, the increasing land values caused by the Erlin plan played significant incentives for local businessmen to support this project, especially for those who have invested in farmlands.

### **Myth beyond Local Factions and Elections**

In the head election of Zhanghua County in 2009, the DPP candidate Wong claimed that there was a partisan conspiracy behind Zhuo's enthusiasm to attract the

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<sup>202</sup> See "The Lands Adjacent to the Erlin Plan Is Hot," *Technology and Humanity*, Vol 49, [http://www.taichung-life.com.tw/index.php?CID=2044&sel\\_no=48&sel\\_class=report&txt\\_search=&REQUEST\\_ID=cGFnZT1jb2x1bW5fc2VhcmNo](http://www.taichung-life.com.tw/index.php?CID=2044&sel_no=48&sel_class=report&txt_search=&REQUEST_ID=cGFnZT1jb2x1bW5fc2VhcmNo)

CTSP's expansion to Erlin. According to Wong, the CTSP's expansion to Zhanghua has been planned in Wong's term as the county head during 2001 to 2005; however, the planned site was Hemei, where water and electricity appeared to be less a problem. Wong accused that Zhuo's dedication to changing the plan site from Hemei to Erlin was closely associated with the land profits of KMT-controlled factions.

Because the KMT-affiliated former county head Ruan Gangmong had a "College Town" program in Erlin ten years ago. This action drove many investors to purchase lands around Erlin area. Unfortunately, the failure in realizing this program in Ruan's term caused considerable damages to the investors. From Wong's argument, Zhuo, as the vice county head during Ruan's term, thus made this effort to help those investors after he got elected in 2005.<sup>203</sup> Therefore, the intention of promoting the Erlin plan was to provide a good opportunity for those investors to reclaim their profits on lands. Wong believed that most of the landowners in Erlin were investors ten years ago. The AUO's Erlin plan was the chance they had waited for so long in order to cash out their investment. That was why Zhuo remained confident in acquiring lands on a very tight time schedule.

Wong's statement illustrated a typical landscape of local politics in Taiwan; some environmental activists also showed the same concern in the interview. Most of

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<sup>203</sup> Epoch Times, October 20th, 2009, <http://www.epochtimes.com/b5/9/10/20/n2694307.htm>

the developing projects would benefit local factions, since most of them were founded on local contracting, financial, or infrastructure businesses. However, that did not necessarily mean that the interests of local factions influenced the decision of local county heads. The reason that Zhuo changed plan sites from Hemei to Erlin was simple: because the AUO wanted the latter. In order to grasp the AUO's capital, the local county head had to play along.

The reason that the author used the term "myth" in this section was that the decision to welcome the CTSP was NOT totally based on self-interests. Erlin was a very good example suggesting that Zhuo's efforts on the Erlin plan did not really transfer to electoral votes. If getting reelected was the primary task for a politician, then introducing the Erlin plan may not be a rational decision.

Compared with the votes in Zhuo's won in the 2005 election, facing the same opponent, Wong, Zhuo received 30,000 fewer votes in 2009. The percentage of the votes obtained by Zhuo in Erlin and Bito (next to Erlin) only changed slightly.<sup>204</sup> (From 59.45% to 57.36% in Erlin, from 54.6% to 50.33% in Bito) This slight decline even showed that Zhuo did not greatly benefit from his Erlin plan in Erlin area. Ironically, in Fushing Village, where the fish farming might be seriously affected by waste water from the Erlin facilities, Zhuo's percentage of votes grew drastically

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<sup>204</sup> Please refer to the data in Central Electoral Committee in Taiwan, <http://210.69.23.140/cec/cehead.asp>

from 43.95% (2005) to 54.77%. Therefore, it was not clear whether Zhuo attained political advantages by introducing the CTSP to Erlin.

Besides, the struggles between local factions and political parties did not appear very relevant at the local level. Despite the fact that local politicians have been active in introducing capital into certain areas in Zhanghua and Taichung County, we can in fact see very similar trajectories in terms of the decision process in both counties. The local partisan distinction on the attitude toward the CTSP was not apparent in both Holi and Erlin cases. In Zhanghua County, even the DPP's candidate, Wong, was supportive to the CTSP's expansion to Zhanghua, though he preferred Hemei. Therefore, it suggested that **this prevailing myth on high-tech science parks was deeply rooted at the local level**. In consequence, local resistance against the CTSP can be mostly alleviated. The state's patronage on the CTSP's Holi and Erlin plans thus successfully penetrated into local levels.

### **Economic Rationality**

A developmental state would make active moves with clear goals in terms of development strategies. In this section, the author will evaluate the performance of the Taiwan state, probing if it had clear goals of development in mind when it decided to ask the AUO to enlarge investment in Taiwan. Did this action help to achieve economic efficiency in the supply chain or in the market?

### **A Key Sector to Taiwan? Some Risks**

Based on the government's response to migration of Taiwan's TFT/LCD sector, it appeared that this industry was key to Taiwan's industrial chain. Did the Taiwan government intentionally bolstering these projects because of its industrial significance for other domestic industries?

Some asserted that the DPP's TTTS plan in nurturing the TFT sector was very problematic. First, the semi-conductor and TFT industries were by no means "new bloomers" in 2002. Instead, they were both very mature business sectors in Taiwan. Both industries were already ranked top in the global market and have consisted huge amounts of economic productions when TTTS was proposed. It did not make much sense for the government to shelter both sectors. Besides, the market fluctuation in both industries was quite high. The global economic boom could easily affect it than state policies, since these industries have already built their own global supply chain.<sup>205</sup>

The second reason that the TFT sector may not be a good sector for the state to nurture was because of its high risks. According to Ye' research on Taiwan's TFT sector, while attracting most of the capital from the stock market, the TFT sector in Taiwan carried an extremely high ratio of loans.<sup>206</sup> Ye also pointed out that this

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<sup>205</sup> Xu Mingyi (2002), "The Analysis on TTTS Policy," commentary from National Policy Foundation, <http://old.npf.org.tw/PUBLICATION/TE/091/TE-C-091-033.htm>

<sup>206</sup> Ye Yinghua and Qiu Xianbi, "A Study on Agent Cost Theory: Capital Structure, Equity Structure,

“capital-intensive, low profitability” character of Taiwan’s TFT sector made this industry an inappropriate target to invest in. The state’s supporting this sector would force the banks to take great risks, and thus jeopardize financial security of Taiwan.<sup>207</sup>

Lin’s research on Taiwan’s LCD sector suggested that the intensity of capital was **negatively correlated** with the profitability of this sector. Unlike the LCD sector in Japan and Korea carefully selected a certain amount of advantageous technological generation to invest, the blind pursuit of increasing production of next-generation supply line by Taiwanese LCD sector was proved inefficient.<sup>208</sup> Shin also believed that the difficulty encountered by the Taiwanese LCD sector was resulting from over-production through previous huge investments. This was a long-term structural problem rather than a short-term market fluctuation. Giving the uncertain profitability of LCD sector, it was quite risky for the government to concentrate on this sector<sup>209</sup>.

**Table 4.6 Some Suspicions of the Cost Effectiveness of the LCD Industry**

Problems	Descriptions
Huge Loans	<ul style="list-style-type: none"> <li>- The loans from the five major TFT companies were estimated more than one billion USD, and consisted of 63.8% of their revenues.</li> <li>- The Ratio of debts of the five companies ranged from 47% to 62%.</li> </ul>
Low Profitability	<ul style="list-style-type: none"> <li>- Only two companies remained profitable, and their profit margin ratios were less than thirteen percent.</li> <li>- The net profit of this sector was in deficit overall.</li> </ul>

From: Ye Yinhua, Economics Daily (Taiwan), May 10, 2006.

And Cost Efficiency,” *Taiwan Financial Quarterly*, Vol 8, Period 3, pp 45-64, 1996.

<sup>207</sup> Economics Daily, May 10<sup>th</sup>, 2006.

<sup>208</sup> Lin Ting-Ru, Shen Yung-Chi, and Hong Ren-Tsai, *Using Structure--Conduct-Performance Model to Explore Taiwan’s TFT-LCD Industry*, paper presented in *New Paradigms of Management*, The 77h Annual Academic Conference, 2008. Taiwan: Taiwan Technology University.

<sup>209</sup> CPA News, January 02, 2009. <http://n.yam.com/cna/fn/200901/20090102291449.html>

In addition, in the crisis in 2008, it seemed again to prove that the TFT sector was not an efficient sector in terms of profitability. According to the analysis from JP Morgan Chase, during the cycle between 2001 and 2010, the global TFT sector can barely keep their financial balance, let alone making profits. It was mostly because this sector had to bear huge loans in the early stage.<sup>210</sup>

During the financial crisis, major companies in electronic sectors in Taiwan suffered severe losses and had to seek for financial aids from the state. These corporations contended that they would lose this cutthroat battle against Korea if the Taiwan government stepped aside.<sup>211</sup> The corporations' catchphrase was straightforward enough: DRAM and LCD were "too big to die." To put it from another angle, the huge amount of investment in the LCD sector during the DPP administration seemed to be proven as a failure. The expansive policy on the LCD sector may also be confirmed as a risky sector, given its grand capital size and unstable profitability.

However, the crisis in 2008 gave the KMT administration an opportunity to discover the limit of the future of the TFT sector in Taiwan. In 2009, President Ma announced a new "Diamond Plan," pointing out new star sectors that the Taiwan government would focus on. This time, the LCD sector was removed off the list.

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<sup>210</sup> Yuanjian Magazine, Vol 285, March 2010, page 127

<sup>211</sup> <http://www.epochtimes.com/b5/8/12/4/n2351920.htm>



### **Fill Gap between Supply and Demand?**

Far from 2005, there was a suspicion that the over-expansion of the LCD sector may lead to serious danger since over-competition in this sector may reduce the profits and over-centralization of capital on this sector may generate social risks. The manager of the CTSP, Lee, therefore urged the Taiwan state to regulate the investment of the LCD sector, for it may cause a waste of public resources.<sup>212</sup>

Lee's prospect was quite correct, for there has been a very serious problem of over-supply of LCD products after 2005. In 2008, the global financial depression traumatized the DRAM and TFT sectors in Taiwan. According to *the Economist*, Taiwan was the country whose economy has been hit hardest by the global slump in 2008 (32% decrease of economic outputs in 2008), mostly because the semi-conductor and TFT sector failed to export during this great depression. The total loss of four major TFT/Panel companies in season four alone in 2008 was 0.8 billion NT dollars.<sup>213</sup> Nonetheless, the economic slump was not the only reason responsible for the shock, the previous over-investment in both sectors, which resulted in over-production, was the primary reason causing the disastrous loss of TFT and semi-conductor sectors.<sup>214</sup> The *Economist* also stated that the electronics sectors (flat-screen monitors and semi-conductors) in Taiwan "were in oversupply even

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<sup>212</sup> Liberty Times, July 24<sup>th</sup>, 2005. <http://www.libertytimes.com.tw/2005/new/jul/5/today-e1.htm>

<sup>213</sup> Zheng, Zhichao, "Avoid Previous Mistake on DRAM Sector When Promoting New Sectors," commentary from National Policy Foundation. <http://www.npf.org.tw/post/1/5787>.

<sup>214</sup> Central News Agency, Jan 2<sup>nd</sup>, 2009.

before the global financial crisis<sup>215</sup>.”

The fact that the KMT administration removed the TFT sector off the “main sectors” revealed that the state eventually perceived that it might be an unwise decision to continue promoting the TFT sector, at least not by solely boosting more production. Given the fact that over-production and low gross profit were both the biggest problems that the TFT sectors in Taiwan shared, more supply and production would cause more harm. A Japanese industrial consulting institute, Display Search, concluded that the global over-supply of LCD products would occur in 2012 since major LCD enterprises would start their production in China simultaneously.<sup>216</sup> Also, according to The Photonics Industry and Development Association in Taiwan (PIDA), the prime time of the Taiwan’s LCD sector in the photonic industry has passed. The ratio of LCD production in the photonic industry has decreased, and is expected to keep decreasing (from 70% in 2010 to 65% in 2013) in the future.<sup>217</sup>

In terms of the 11<sup>th</sup>-generation facilities that the AUO promised to establish in Taiwan, the AUO also admitted that it was a goal in the long term. Since the market response to the 11<sup>th</sup>-generation products was not certain yet, most of the LCD providers felt reluctant to conduct this investment any time soon. In other words, the AUO also comprehended that the risks for operating the 11<sup>th</sup>-generation facilities

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<sup>215</sup> [http://www.economist.com/world/asia/displaystory.cfm?story\\_id=13109874](http://www.economist.com/world/asia/displaystory.cfm?story_id=13109874)

<sup>216</sup> Tech on Line, <http://big5.nikkeibp.com.cn/news/flat/52055-20100624.html>

<sup>217</sup> Liberty Times, January 6<sup>th</sup>, 2011. <http://www.libertytimes.com.tw/2011/new/jan/6/today-e21.htm>

were very high. Therefore, it has hesitated to initiate the construction of production lines in Taiwan despite of its promise to build them.

The MOEA's vice director, Yen, has recognized in 2010 that, the "N-1 Policy" may seriously jeopardize the competitiveness of Taiwanese firms. While Korean LCD manufacturers have conducted massive capital outflows to China, this rigid policy has become a significant barrier for Taiwan's LCD industries. Taiwanese firms did not only enter the Chinese market relatively late, but also had to produce less competitive products in China in order to comply with Taiwan's N-1 policy. Besides, there was another disadvantage for the firms failing to migrate to China early. The Chinese government was planning to raise the tariff of LCD products, and it would build another barrier for companies whose main bases were outside of China.<sup>218</sup>

The MOEA promised to re-evaluate this policy and considered opening the door for Taiwanese LCD industries to move their capital to China via joint-ventures or merging Chinese firms. However, there will be "no time table for the change of the 'N-1 policy.'<sup>219</sup>" In other words, the Taiwan state also acknowledged that the "N-1 Policy" was inefficient and even detrimental to the development of Taiwan's LCD industries. However, the inclination of self-protection of the developmental state has driven the state to set the limits on possible substantial capital flow.

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<sup>218</sup> Southern City News (南方都市报), December 22, 2010.

<http://digital.china.com.cn/a/11737678.shtml>

<sup>219</sup> UDN News, December 31, 2010. <http://udn.com/NEWS/FINANCE/FIN3/6066145.shtml>

## **Structural Adjustment and Strategy Selection instead of Expansion**

During 2008 to 2009, specialists have determined several structural weaknesses of Taiwan's TFT sector. **First, the developing strategy of Taiwan's TFT sector was quite outdated.** The failure in building their own brands and downstream sector chains made them more vulnerable encountering the economic depression. Instead of establishing their own downstream industries to alleviate potential harms resulted from overproduction and thus retain their competitiveness, the TFT sectors in Taiwan focused on the OEM operation behind big brands. This decision made Taiwan's TFT sectors low value-added assemblers rather than high value-added providers.<sup>220</sup> Especially in the 2008 crisis, while the Taiwanese TFT companies suffered a loss up to 0.8 trillion NT dollars within Season Four, their Korean counterparts only took 0.25 trillion deficit. This difference of profitability was associated to the discrepancy of developing strategies. While the capacity utilization rate for Korean LCD providers remained above 80% during the 2008 crisis, that for Taiwanese counterparts was only staggering from 30% to 40%.<sup>221</sup>

Based on the research of Topology Research Institute, the Taiwanese TFT companies' biggest disadvantage was that they were incapable of building their own

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<sup>220</sup> Lan Chunseng, research article in "New Society for Taiwan", Vol 7.  
<http://www.taiwansig.tw/images/stories/journal/0912/20091223.pdf>

<sup>221</sup> China Review News, April 28, 2010.

<http://www.chinareviewnews.com/doc/1013/0/4/0/101304073.html?coluid=7&kindid=0&docid=101304073>

brands. And that led to great losses in the 2008 crisis.<sup>222</sup> Another researcher from National Policy Foundation, Zheng, similarly indicated that the failure in building their own brands and developing new technologies had resulted in the laggard of TFT sectors in Taiwan.<sup>223</sup> Besides, the TFT sector was also criticized for its incapability of probing global market demands, which seriously weakened its competitiveness compared with their Korean competitors.<sup>224</sup>

**“Fragmented structures” were also specified as one of the weaknesses of the TFT sector in Taiwan.** Unlike in Korea, where only two giant providers were running the TFT industry (Samsung and LG), there were five major TFT corporations in Taiwan, let alone medium-sized ones. The fragmented structure caused the inefficiency of investment and over-competition. This fragmented structure also contributed to LCD manufacturers’ OEM strategies. The AUO once claimed that there were too many TFT companies in Taiwan,<sup>225</sup> and it was this structure of over-competition that caused the dead end of Taiwan’s LCD sectors.

In 2005, the DPP-affiliated President Chen and Premier Hsieh initiatively asked the TFT industry to “merge” in respond to its serious competition against Korean Samsung. This was a very rare statement since the DPP administration did not

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<sup>222</sup> Yuanjian Magazine, Vol 285, March 2010. This was from an interview to Li qiupu, a researcher in Topology Research Institute.

<sup>223</sup> Zheng, Ibid.

<sup>224</sup> Zhan Quankai, “*The Limit of Taiwan’s TFT Industries in the Global Exchange System*,” article presented in Annual Conference of Taiwan Sociology Association, 2006.

[http://soc.thu.edu.tw/2006TSAconference/\\_notes/2006TSApaper/3-4.pdf](http://soc.thu.edu.tw/2006TSAconference/_notes/2006TSApaper/3-4.pdf)

<sup>225</sup> Economic Daily, October 1<sup>st</sup>, 2004

intervene too much in a single sector in terms of giving guidance of technology policies. However, the government did not set up measures of financing constraints for the incompetent enterprises. Most of the mergers did not occur until the second biggest Taiwan LCD manufacturer, Chimei, conducted a merge with Foxxxcon in 2010.

With many structural problems ahead, the TFT sector required a structural adjustment, instead of the N-1 policy, to compete with their Korean opponents. In this sense, the priority was to enhance both competitiveness and the profitability of Taiwan's TFT sector, particularly when the sector was highly dependent on bank financing and the government's support. However, there was very little state's intervention in the structure or strategies of Taiwan's TFT sectors. Rather, the state paid more attention to keeping capital and technologies, whose profitability was still uncertain, in Taiwan.

### **Political Concerns: Controlling Capital**

Since the state acknowledged the fact that the LCD industry's investment in Taiwan would not help enhance the competitiveness of this sector, why did the Taiwan state still insist that the AUO initiate both Holi-Chixing and Erlin plans? Based on the interviews and the statements from a few government officials, this dissertation argued that **keeping private investment in Taiwan** may be a far more

important concern for decision-makers.

**Given its capital-intensive feature, the production of the TFT sector was responsible for 13% of the total GDP in Taiwan ( 1.8 trillion NT dollars), and it provided 0.2 million job positions on the job market as well.** This sector, given its size of capital input, was too important for the government to neglect.<sup>226</sup> To put it differently, the extremely high ratio of GDP produced by the TFT sector was a dominant factor in shaping politicians' mindset. By the same token, it was this "capital-intensive" character of the TFT sector that made it attractive for politicians who aimed to create short-term economic booms. Because the flow of a large amount of capital would lead to an instant stimulation of GDP, this quick bonus would make a positive credit as a responsible administration with efficacy.

How sensitive were Taiwanese politicians to the fluctuation of GDP? From the DPP to the KMT administration, in the occasions of propaganda, the GDP growth was always the top issue in terms of the performance of government. The government officials particularly concerned about economic figures when they intended to prove their economic policies were working, to the extent that sometimes they would even forge the data. According to the author's interviews with previous cabinet officers, one of them mentioned that:

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<sup>226</sup> Economics Daily, June 5, 2008.

*“During the meetings in the Executive Yuan, we were all very sensitive in “numbers” related to economy. The MOEA constantly reminded us that certain policies would cost us several percentages of GDP. The Premiers and all the cabinet had been led to a trap of financial digits. They all considered it a critical issue.”*

Correspondingly, an environmental activist argued that

*“I have been in the APC review meetings all the time. Most officers in the bureaucratic system were neither bad nor corruptive. In my perspective, they were just believing that boosting economy is “a must.” When their supervisors stated that a huge employment can be generated by a certain investment plan, they were easily convinced. They were not convinced that this investment was environmentally sound though, but they viewed it as a necessary evil for Taiwan.”*

By keeping both plans in Taiwan, the state officials assumed they would increase GDP any way despite the fact that profitability of this sector was unstable. However, even both plans would probably become burdens for economy in the future, the preliminary constructions such as land investment and engineering contracting would create the image of prosperity, and that was what governmental officials anticipated.

### **Deliberation**

Given the significance of this industrial policy, both from economic and environmental perspectives, it was quite central to have deliberation in the



decision-making process. However, deliberation was not realized until the environmental activists filed lawsuits in administrative court.

### **CTSP's Expansion: A Regional Plan or Expediency?**

In order to hold both plans in Taiwan, the *Regional Planning Act (RPA)* played an important role, since industrial policies cannot conflict with the grand design of regional development. A regional plan was a guideline for regional development and was created to prevent discordant developing behaviors at the local level. Therefore, when plans for local development violated this grand principle, the developing proposals, by law, needed to be reconsidered. From a macro perspective, the regional plans should be integrated into the national plan as a whole. Therefore, the regional plans could be treated as the extension of the state's capacity in carrying out development schemes at the regional level. In other words, regional plans were supposed to come out of a deliberative process where various categories of development agendas were discussed and evaluated by the state. In the case of the CTSP, however, the livelihood of local agriculture and the fishing industry in central Taiwan would be challenged by the state's coercive decision on the AUO's investment in Holi and Erlin.

Right from the beginning from the Holi-Chixing plan, the state and the developers found them encountering a major difficulty: this industrial plan has

violated the principles of Central Taiwan Regional Plan (CTRP). There were two main problems in terms of the Holi-Chixing plan. First, the two designated lands were originally categorized as agricultural land. According to the RPA in Taiwan, both farmlands were for agricultural use only. Therefore, industrial use of the land was prohibited by law. If the government officials would like a change in category of land use, they had to amend the CTRP first, which made it a complex option.

Second, the CTRP has stated that Central Taiwan, as “a fine living circle,” should exclude industries with possible risks to health. There has been a great amount of organic agricultural industries in this region, and the potential pollution produced by high-tech factories may strangle thriving local organic businesses. Based on this principle, this region would only allow industries associated local livelihood, definitely not a high-tech science park.

**Table 4.7 the Guidelines of the Central Taiwan Regional Plan**

	Plan Guidelines
The Features of Holi and Erlin	<p>Holi belongs to the category of “a fine living circle,” in which</p> <ol style="list-style-type: none"> <li>1. the developing plan is “to conserve agriculture and marine resource and to provide a sustainable environment for farming and fishing.” The top priority is to develop advanced agricultural technologies accompanied with ecological tourism.</li> <li>2. “for mountainous areas in Holi, agriculture and recreation infrastructures should be developed in order to improve the living conditions in the remote villages.” (page 6-46)</li> </ol>
Land Use	<p>The guideline states that</p> <ol style="list-style-type: none"> <li>1. “the developing costs (both internal and external costs) should be paid by users and beneficiaries. (page 2-1)</li> <li>2. “the land owned by Taiwan Sugar Company with good farming conditions should be divided into special farming preserved exclusively for environmental conservation or agricultural production.” (page 6-46)</li> </ol>
Pollution Control	<p>Several pollution control measures were suggested to be used against the expansion of the CTSP.</p> <ol style="list-style-type: none"> <li>1. “For industries with heavy pollution, the government needs to encourage their migration by subsidies or bans.” (page 5-16)</li> <li>2. “In order to improve the utility rate in existing industry Parks, the government needs to promote the upgrading plans.” (page 5-24)</li> <li>3. “Any over-developing actions should be prohibited in the water-collecting area and river basins. (page 6-2)</li> <li>4. “Industries with high-volume water consumption should be established in areas with abundant water resources.” (page 5-22)</li> </ol>

Source: the First and Second Comprehensive Review of Central Taiwan Regional Plan, Taiwan.

Therefore, in order to legitimize the Holi-Chixing plan, the state had to redefine the objective of the CTRP, especially the term “a fine life circle.” To solve this problem, the state under the DPP administration asked the APC to compose a “Second Comprehensive Review of Central Taiwan Regional Plan” in 2006, and then

arbitrarily removed the term “a fine living circle.” It also stopped indicating Holi as an agricultural area. The state even changed the land category of Holi and Chixing without much discussion held in the APC meetings, from agricultural to industrial use; trying to further legitimize the Holi-Chixing plan.

To evade further legal disputes, the NSC also declared that the CTSP’s Holi Plan technically aimed to establish “a manufacturing zone” around the Holi area, which was theoretically associated with local livelihood. Following this rationale, in the version of the Second Review in 2006, Holi-Chixing plan was included into the “manufacturing zone.”<sup>227</sup>

This dispute could have been a great opportunity to review options for development for central Taiwan area. However, the state only focused on tackling technical and legal matters in facilitating Holi Plan other than conducting a comprehensive, deliberative discussion on the CTRP itself. The state decided to leave the chief framework of the CTRP intact in this “comprehensive review,” but to make minor wording changes to serve the Holi-Chixing plan.

When the CTSP began the Erlin plan in 2008, the KMT administration also encountered the limits of regional planning. Since the revision in 2006 was only to seek for a temporary outlet to break the Holi-Chixing gridlock, it was expedient.

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<sup>227</sup> See meeting records of the 188<sup>th</sup> APC meeting.  
<http://www.cpami.gov.tw/web/filemgr/committee/apc/185.doc>

Therefore, when the Erlin plan was on the way, same conflicts occurred. Following the measures in 2006, the state did not hesitate to adopt similar revisions. Only this time, the state wanted to do it more efficiently and even more arbitrarily.

Because the CTRP defined Erlin as a “unit for tourism and agriculture,” the state under the KMT administration needed to remove the wording which caused disputes. In 2008, the KMT administration rejected the Second Review inside the Executive Yuan meeting simply because the revision in 2006 could not break the gridlock of the Erlin plan. In May 2009, the KMT administration called six meetings for the APC within two months and eventually arbitrarily revised the CTRP based on the CEPD’s idea without asking the APC, which was responsible for conducting deliberative area planning meetings, to amend the regional plan.

In the first APC meeting about the Erlin plan, the policy memo indicated that the progress schedule of this project was “supervised by the Executive Yuan.” (Please see the table below.)

**Table 4.8 the Progress Schedule of the Erlin plan**

Progress	Scheduled Deadlines
Water and electricity to be provided	1/31/2009
The EIA review to be passed	6/15/2009
The development of non-city land to be reviewed	6/28/2009
The construction license to be issued	7/29/2009
The design of the science park by the CTSP office to be completed	02/2009-08/2009
Acquisition of lands to be completed	08/2009-12/2009

Source: Based on the briefing report in the first APC meeting. <http://e-info.org.tw/node/46990>

Due to the delay of the EIA review, the CEPD decided to revise the CTRP without the APC's direct involvement. The central administration only asked the APC to recognize the revision made by the Executive Yuan. By law, the APC should be the apparatus that made decisions on any changes as to regional plans. Therefore, the DPP administration, despite its eager to revise the CTRP in 2006, still allowed the APC to propose the new revision although it returned the proposal to the APC in 2007. Compared with the DPP, the KMT administration's strong dominance about the revision without the APC's involvement seemed an inappropriate intervention. Throughout the revision process from 2008 to 2009, the APC was only informed of those changes made by the CEPD, instead of being authorized to do so.<sup>228</sup>

In the revised version of the CTRP in 2009, the KMT administration removed Erlin's agricultural character, and clearly stated that the CTSP's Erlin plan was "a

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<sup>228</sup> It was quoted from a blog of an independent environmental journalist. [http://shuchuan7.blogspot.com/2009/05/blog-post\\_22.html](http://shuchuan7.blogspot.com/2009/05/blog-post_22.html)

strategy for local development.”<sup>229</sup> The officials in the Construction and Planning Agency (CPA) admitted that “the Executive Yuan has set the deadline, and asked us to approve the revision by June 29<sup>th</sup>.”<sup>230</sup> The CPA indicated that, with strong suggestions from the NSC, features of science parks had been successfully integrated into the CTRP, and therefore the new CTRP should be legally compatible with the Erlin plan.<sup>231</sup> However, the “comprehensive” review was not comprehensive at all, since it again only paid attention to removing obstacles for the construction of the Erlin plan. Besides, the state again granted no time for deliberation for the debate of local development.

**Table 4.9 the Timeline for the Revision of the Central Regional Plan**

Time	Progress of Revision
June 2006	The APC cancelled the agricultural feature of the Holi area.
December 28, 2006	The APC approved the Second Review and submitted to the Executive Yuan.
June 2007	The CEPD returned the Review to the APC because the Review needed to be “in coordination with the state’s big development projects (Erlin, namely).”
September 2008	The NSC officially asked the APC to add the Erlin plan into discussion.
May 22, 2009	The Executive Yuan revised the Second Review and added the CTSP’s Erlin plan in it. The APC was only “informed of the changes.”

Source: Compiled and organized by the author.

<sup>229</sup> See <http://e-info.org.tw/node/43321>

<sup>230</sup> It was based on the interview with an environmental activist. Also see

<http://e-info.org.tw/node/46990>

<sup>231</sup> <http://e-info.org.tw/2009/05/090506A.htm>

From the facts above, one observed that the state, both the DPP and the KMT administrations, exploited their administrative expediency at the risk of violating the area planning procedures, which would compromise the state's capacity in deliberative planning of development. Because of that, the CTRP had to be amended whenever a major investment squeezed in. From 2005 to 2010, the Second Review of CTRP constantly came back and forth between the Executive Yuan and the APC, mostly because new needs resulted from the CTSP's expansion kept coming into sight. Each revision of the CTRP had to be inclusive of the CTSP's expansion schemes. Therefore, the final version of the CTRP has not been officially approved by the KMT administration by the present, because new concerns about the new industrial project seem likely to keep emerging in this area.

In conclusion, the author suggests that **the state's failure to conduct substantive comprehensive reviews based on deliberation should be mainly responsible for the time waste.** The economy and area planning were both impacted by the state's irresponsible short-term expedient manipulation of the CTRP. Both the DPP and the KMT administrations failed to propose a deliberative framework as a long-term agenda. Rather, they only focused on eliminating minor legal obstacles to serve short-term goals. The expediency thus caused a fragmented regional plan and more waste of time.



### **Arbitrary Site Selection**

The site selection for the AUO's industrial plans was an important indicator examining the state's capacity in deliberation, for site selection was involved with various interests among different sectors and stakeholders. However, site selection for the Erlin plan left very little room for public deliberation. According to the NSC's *Site Selection Guideline*, site selection of science parks should meet the parameters of regional planning, and it must avoid environmentally sensitive areas. However, when the NSC announced their selection parameters for the AUO's TFT facilities, environmental concerns only weighed 28 % of the evaluation, and Erlin's sensitive ecology and geology were totally removed from discussion throughout the selection process.<sup>232</sup>

With regard to the site choice during the third expansion of the CTSP in 2008 and 2009, an APC committee member, who was also a professor, revealed:

*“Although the NSC announced that there would be seven candidate sites for selection in the new expansion (Period Four) of the CTSP, we all knew that the final decision would be Erlin.”<sup>233</sup> It was not that Erlin was the most suitable place to establish this new industrial plan; rather, it was because the AUO had publicly stated*

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<sup>232</sup> This statement was proposed by professor Liao, who was a member of the APC. See Peopo News, <http://www.peopo.org/shuchuan/post/46518>

<sup>233</sup> The third expansion of CTSP would be located in Erlin, Zhanghua County.

*that they had chosen Erlin as the plan site.*"<sup>234</sup>

By law, the NSC had to nominate a number of candidate sites considering environmental concerns. In 2008, the NSC did ask local counties in central Taiwan to submit a list of suitable sites for the CTSP's third expansion. Zhanghua County submitted Hemei as the candidate site then, since Hemei possessed the advantage of easy electricity access, a shorter distance to the CTSP main complex, and fewer environmental costs in setting up supporting industrial facilities. However, before the NSC made decisions, the AUO sent a message to Zhanghua County head, Zhuo, stating that the corporation preferred Erlin to other possible candidate sites.<sup>235</sup> Zhuo thus showed great enthusiasm in introducing the CTSP program into Erlin, and then listed both Hemei and Erlin as the candidate sites for winning the CTSP's expansion project.

In August 2008, with little surprise, among seven candidates, the NSC announced Erlin as the location for the new expansion of the CTSP.<sup>236</sup> Despite the fact that ecologically sensitive Erlin had suffered from water shortage and therefore might not meet the need for industrial development, the committee in NSC still insisted that Erlin was the optimal choice and ignored Hemei, which was also a candidate site submitted by Zhanghua county and would probably be a more suitable

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<sup>234</sup> Interview with an APC committee member.

<sup>235</sup> Epoch Time, June 17, 2008. <http://www.epochtimes.com.au/b5/8/6/17/n2158046.htm>

<sup>236</sup> Epoch Times, August 30, 2008, <http://www.epochtimes.com/b5/8/8/20/n2235220.htm>

choice environmentally as well as socially. To be more explicit, Hemei was designated for industrial use during early city planning of Zhanghua.

Why did the NSC insist to choose Erlin as the site for the expansion? According to Zhuo, the property ownership for designated lands in Erlin was relative simple. The AUO's original target was Wuri-Kuaiguan area in Taichung County because it was adjacent to the Taiwan High-Speed Railroad Station. However, the status of the property ownership in that area was more complicated. Most of the lands in that area were privately owned, and it would also take more time to change the category of land use from residential use to industrial use.

Therefore, to meet the preference of the AUO, the County head Zhuo delivered Erlin plan, which included two farm lands under the TS (Taiwan Sugar) operation. Because most of the lands in this area were owned by this SOE, there were only 21 private land owners in this area, and it would make land acquisition far easier. In the guiding tour arranged by Zhuo in 2008, the CEO of the AUO admitted that he was "very satisfied" with the size of land (more than 1000 acres) and easier procedures in acquiring the land.<sup>237</sup> Two months after the AUO's showing interests in Erlin in public, the NSC decided that Erlin was the best site for the CTSP' third expansion.

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<sup>237</sup> Economic Daily, June 6, 2008.

The participating scholars and activists foresaw the result before the NSC announced their final decision. This fact suggests that facilitating investment has overruled the efforts of deliberation undertaken by the state.

**Table 4.10 The percentage of lands owned by the SOE in the CTSP Cases**

	Sites	Percentages of lands owned by the TS (a SOE)	Percentages of private lands	Selection Decisions
Second Expansion (Base 1)	Holi	72%	NA	Selected by two TFT Corporations
Third Expansion (Base 2)	Chixing	99%	0.01%	Selected by the AUO
Forth Expansion	Erlin	78%	10%	Selected by the AUO

Source: collected and organized by the author

The rationales behind the AUO's preference to Erlin are conceivable, since the complexity of private property ownership would affect the process of land acquisition. The longer the realization of the Erlin plan took, the later the AUO would be allowed to migrate to China. Nonetheless, since the NSC conducted its decision-making process in a black box, rival interests could not be revealed just by viewing the final decision. The NSC was supposed to select an optimal site taking environmental protection, industrial efficiency, and area planning into account. However, in the end, Erlin emerged as a competitive candidate mostly because of its sole advantage on local property status. Compared with the other sites, Erlin did not seem very suitable

for such a large-scaled industrial development, considering its ecological sensitivity.

To be concluded, the state did not allow much room and time for site selection for the AUO's industrial plans. The decision was made solely based on the state's strong intention to promote both projects without the participation of a wide array of conflicting interests. This administrative expediency actually twisted the external costs, and it was resulted from the state's N-1 policy and its intention to keep capital in Taiwan.

### **Degrading Deliberation: Reducing Public Participation**

The EIA members by law undoubtedly should monitor decisions related to environmental concerns. According to the *EIA Act*, there were nine government-assigned members representing involved governmental agencies. Therefore, the central administration held nine "iron votes" out of the total of twenty one, while the rest fourteen members were selected from a list of names recommended by environmental experts and environmental groups.

During July 2005 to July 2007 (the sixth term), the EIA committee was reformed by Chang, who was used to be an anti-nuclear activist. He allowed more activists from civil groups, though without the scientific background, to be selected into the committee. Some grassroots activists entered this institution via his reform. The direct involvement of grassroots activists into this monitoring institution made the EIA a

battleground.<sup>238</sup> Their hardcore position also triggered a few struggles in the EIA reviews. However, this diversity also symbolized the possibility of public deliberation.

Yet, the rivalry among the EIA members in some highly controversial cases soon caused a deadlock in the EIA. One of the EPA officials who had been deeply involved in the anti-nuclear movement with Chang described that:

*“We do respect these EIA members, since most of them were our comrades before. Having said that, with their hardcore attitude in the EIA committee, there was no degree of differentiation among different cases. Once there was a concern of environmental risks, the case would be immediately denied. As a result, in the EIA meetings, we were where we were each time, and no progress could be anticipated.”*

The political leaders were not satisfied with the stagnancy in the EIA. In order to break the stalemate, the Premier asked Chang to initiate voting in Holi-Chixing cases and thus had it approved in July 2006 without much discussion. This strong position soon triggered a series of legal actions from environmental activists.

The EIA committee was therefore again regrouped in July 2007 (the seventh term). In order for the DPP administration to exclude those hardcore activists, the civil delegation was removed off the selection list. Environmental activists thus lost

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<sup>238</sup> It was based on the interview with the EIA members. The consulting company kept delivering the same reports without revising the problematic parts, even some EIA members has serious criticism against it.

access to this institution. In the re-selection in July 2009 (the eighth term), environmental groups were further alienated from the decision-making process, since most of the candidates recommended or endorsed by environmental groups were not selected into the committee at all.<sup>239</sup>

These changes wielded impact on different dimensions. First, the EIA committee became much “quieter” after the grassroots activists were excluded from this institution. Compare with the fiery noises made by the committee in reviewing Holi-Chixing plans in 2006, the EIA reviews on the Erlin plan appeared to be more moderate. In 2006, the EIA members openly criticized the intervention from the DPP administration in the Chixing plan. However, in 2010, the EIA members were very quiet when the KMT administration was trying to set the tone for the Erlin plan. The “quieter” EIA committee definitely resulted in less news coverage on conflicts in the EIA review, and most of the conflicts were in fact well kept inside the committee.

Second, losing the political leverage to influencing policies, environmental activists began to adopt legal approaches in “arousing troubles.” This strategy indeed put pressure on the Executive Yuan, and the court verdict did recapture the attention of the mainstream media. The lawsuit against the flawed EIA review on the Chixing plan was a remarkable success. Given this encouraging experience, environmental

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<sup>239</sup> China Times, August 1, 2009.

groups and local residents decided to file another administrative lawsuit against the EIA review on the Erlin plan in March 2010.<sup>240</sup> This strategy turned out to be very influential as well.

### **Accountability and Transparency**

In order to realize the N-1 policy on the LCD sector, political leaders decided to intervene for the operation of the EIA committee in facilitating the EIA process. These interventions had undermined both the deliberative capacity and accountability of the EIA committee. However, this authoritarian manner also triggered great resistance from environmental groups. Their social campaigns and legal lawsuits both posed tremendous impacts on the EPA system. Although the EPA and central government attempted to evade the monitoring from the civil groups and judicial system, they were eventually forced to make adjustments. A series of policy reforms had been made, and government's accountability was improved from those reforms.

### **Politicians' Intervention in the EIA Procedures**

In the early stages of both cases, the central government was able to remain its respect for the checking mechanism such as the EIA review. This attitude allowed the EPA and the APC to act on their will. The attention paid to the review progress was dependent on cabinet members. The county head, Zhuo, once complained that after

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<sup>240</sup> PTS News, <http://news.sina.com.tw/article/20100316/2887941.html>



the resignation of a cabinet member, Zhu, in 2009, the Executive Yuan seemed to lose the capacity to coordinate the Erlin case. Even so, the author suggests that the political intervention seemed likely to constantly step in whenever there were dominant Premiers in office. When political leaders sensed that it would be difficult to reach agreement through the EIA or APC procedures in a short time, their respect for the checking mechanism could easily vanish. Both the Holi-Chxing and the Erlin plans went through dramatic changes in the EIA review right after two strong Premiers, Su and Wu, began their new terms. Just like Su's support to the Holi-Chixing plan in 2006, the Erlin plan was conveyed by Premier Wu in 2009 when they were just nominated as new Premiers. In other words, the intervention was not entirely institutional, but rather a personalized fashion.

**Table 4.11 the Effect of Premier Su and Premier Wu on the AUO's Plans**

Plans	Dates for the First EIA Review	The Numbers of Meetings before the Premiers were in Power	The Numbers of Meetings after the Premiers were in Power	Starting Dates for the Premiers' Terms	Review Passing Dates	Corporations' Expectation for Beginning the Construction
Holi	November 2005	3 panel session	1 panel session 1 committee	Jan 2006	February 2006	March 2006
Chixing	March 2006	0	5 panel sessions 1 committee	Jan 2006	July 2006	May 2006
Erlin	April 2009	9 panels	3 panels	September 2009	October 2009	December 2009

Source: collected by the author based on the EPA data.

From the table above, one can observe a tendency that the Premiers' attitudes were main interventions in the EIA reviews. While the EIA committee tended to adopt "the time-delaying strategy" to force developers to give up environmentally controversial cases, the Executive Yuan's powerful intervention changed the routines. In order to freeze further reviews, Premier Su in 2006 and Premier Wu in 2009 both set clear agendas to have the EIA committee approve both cases within a given schedule. With high expectations from strong Premiers, the EIA review, as an autonomous checking mechanism, thus became "a big obstacle" for the state's economic plans and thus was removed by the state on its way to control domestic capital.

#### **A. Premier Su's intervention in Holi-Chixing**

Most of the Holi project was operated under the DDP's administration. As the review was procrastinated by the antagonism in the EIA committee during 2005 to 2006, the DPP politicians decided to jump in, particularly Premier Su. Premier Su gave an explicit order, asking all the governmental departments to help the AUO to pass the EIA review.<sup>241</sup> Premier Su and his staff complained that "the EIA had become the biggest obstacle for Taiwan's economic growth" in the Executive Yuan meetings and even reprimanded the EPA director, Chang, for Su believed that the EIA

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<sup>241</sup> The vice Premier, Cai, also set a clear timeline of 45 days, asking the EIA committee to finish the EIA review of the Chixing plan. See Epoch Times, March 29, 2006. <http://epochtw.com/6/3/29/24676.htm>

review was biased.<sup>242</sup> With Su's strong support, the director of the MOEA and the AUO publicly stated that the Holi-Chixing plan "must be passed."<sup>243</sup>

The vice Premier, Cai, also personally contacted one of the EIA members to rally for the Holi-Chixing plan. Cai's behavior was highly associated with Su's anxiety to push the Holi-Chixing plan into practice, and that seemed not wise, because the apparent intervention into the EIA procedure, which was considered direct compulsion on EIA members, caused a political drama. As a result of this intervention, nine EIA members initiated a public announcement to protest "invisible hands from the Executive Yuan."<sup>244</sup>

Three months after Cai's call, the EPA initiated a quick vote with no media and auditing people aside, which was very rare. With unanimous support from some government-assigned EIA members, the Chixing plan was approved with a 10 to 8 margin in June 2006. Some EIA members thus claimed that "the EIA was dead" because of the manipulation of political hands behind the scene.

In fact, Chang was indeed making compromises with the Executive Yuan since he believed that the Holi-Chixing plan was less harmful than the other cases such as the FSP plan. To be able to effectively block more environmentally harmful cases like the FSP and ENP plans, Chang believed that some sort of trade with the MOEA and

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<sup>242</sup> <http://e-info.org.tw/node/4470>

<sup>243</sup> Economy Daily, March 10, 2006.

<sup>244</sup> UDN News, March 29, 2006.

the NSC might be needed.<sup>245</sup> Although Chang successfully accomplished the mission, the conflict between Chang and Su eventually led to Chang's resignation in 2007.

### **B. Premier Wu's intervention in Erlin**

When the Erlin plan encountered slow progress in the EIA reviews, Premier Wu and his secretary, Lin, also decided to "give a hand." Before the EIA review in October, Lin held a coordination meeting, directly asking the EIA committee to approve the Erlin plan in October. The statements from the NSC and the EPA both proved that Lin gave direct order to the EPA, asking the EPA to break the gridlock in the EIA committee.<sup>246</sup>

Recognizing the fact that waste emission under the Erlin plan would be the top concern in the EIA review,<sup>247</sup> Lin called for a trans-departmental meeting (the EPA, the NSC, and the MOEA). He asked the future ENP plan in Yunlin to receive waste water from Erlin as cooling agents.<sup>248</sup> In September 2009, Lin also announced that "through his coordination, the Erlin plan would be approved by the EIA committee in October, and the construction could be expected to be started in November."<sup>249</sup> After knowing that the ENP might not be an appropriate source to deal with wastewater,

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<sup>245</sup> This was based on the interview with Chang's staff.

<sup>246</sup> <http://e-info.org.tw/node/48084>

<sup>247</sup> The AUO originally delivered two proposals dealing with the issue of their wastewater discharge: the first solution was to release waste water into the old Zhuoshui River in Zhanghua; the second one was to release it into the new Zhuoshui River in Yunlin. Both Zhanghua County and Yunlin County have clearly indicated however that they would reject the wastewater discharge. Therefore, none of these solutions could work. Because local farmers concerned much about the issue of waste water release, it has been the top issue in the review.

<sup>248</sup> China Times, October 3rd, 2009. <http://ecolife.epa.gov.tw/blog/post/840683>

<sup>249</sup> <http://e-info.org.tw/node/48054>

Premier Wu initiated another solution: “the marine discharge pipe program.” Wu publicly pledged that wastewater produced by the Erlin plan could be released to the outer sea directly through a two-mile long pipe, to reduce its negative impact on costal fish farming and agriculture along the riverbank.

However, the political intervention caused at least two huge problems. First, when making the solutions public, Lin and Premier Wu also sent a deadline for approval of the Erlin plan to the EPA. This coercive force has seriously deteriorated the EIA’s deliberation and independence. Secondly, since the ENP case was still under review by the EPA, Lin’s suggestion seemed actually irresponsible. However, these two arbitrary statements by Lin and Wu revealed that, under the strong pressure from politicians, the independence of EIA review has been seriously challenged.

Even when one assumed that Lin’s or Wu’s solutions were both feasible technically, the biggest problem of their solutions was that both of them had altered the existing institution in an arbitrary fashion. According to the *EIA Act*, each project needs to be reviewed in smaller panels before it can be submitted to the review committee. In the panel meetings, the AUO has proposed two solutions handling waste water emission, and the suggestions from Lin and Wu were nowhere near these programs. Therefore, if the AUO and the CTSP really decided to adopt these solutions, by law they had to re-submit the proposal to the panel, which would then start a brand

new review process.

In fact, in the panel meetings in July 2009, the panel has discussed the possibilities of installing a marine discharge pipe, but the AUO was not interested in this alternative, since it would cost extra 1.6 billion NT dollars to install the pipe.<sup>250</sup> The CTSP office therefore removed this option in the EIA report. In the early EIA review in October 2009, the deputy head of the CTSP, Guo, asserted that “a marine discharge pipe was never considered a potential solution.”<sup>251</sup>

With Premier Wu’s coercion, the EIA committee made a final decision in 2009 to adopt the pipeline initiation. The EPA director, Shen, claimed that it was legally acceptable that Premier Wu made the announcement “without the approval of the EIA committee.”<sup>252</sup> In explaining why the EIA committee adopted the new marine pipeline solution without restarting a brand new EIA review, Shen and his staff, Ye, stated that both the ENP or the marine discharge pipe program were “far better than the AUO’s original plans”. Hence, “there was no need to restart the EIA procedure from the beginning.”<sup>253</sup>

The feasibility of Premier Wu’s pipeline proposal did not matter as much as its implication did to the EIA committee. The action from Premier Wu has sent a

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<sup>250</sup> Liberty Times, October 22nd, 2009.

<http://www.libertytimes.com.tw/2009/new/oct/22/today-life7.htm>

<sup>251</sup> [http://shuchuan7.blogspot.com/2009/10/blog-post\\_06.html](http://shuchuan7.blogspot.com/2009/10/blog-post_06.html)

<sup>252</sup> Taiwan Lipao, October 29<sup>th</sup>, 2009.

<sup>253</sup> Liberty Times, October 22nd, 2009.

<http://www.libertytimes.com.tw/2009/new/oct/22/today-life7.htm>

message to the EIA committee that the state would take any actions, to hold the capital in Taiwan. By showing how determined the state was in facilitating the Erlin plan, the EPA and the EIA committee eventually violated the EIA rules and complied with Wu's doctrine.

In fact, most of the supporting infrastructures or pollution-abating solutions for the Erlin plan were simply built on illusions. The water sources for the Erlin plan was solely dependent on a dam to be built five years later, with the fact that this dam (the Hushan Dam) still has not passed the EIA review. According to the Water Bureau's statement in the EIA meetings, the shortage of water supply in Zhanghua has constantly been an issue for attracting industrial investment. The over-extracted underground water in Zhanghua has resulted in serious land subsidence. However, for the Erlin plan, the CTSP would "borrow" 0.48 ton of tap water and 6.65 tons of water from agricultural water on a daily basis. It even required another small dam in the future to keep it fully functioning.<sup>254</sup> All the facts suggested that the EIA committee seemed to hold reasonable doubts on the desirability, viability, and feasibility of the Erlin plan. One of the EIA members even confessed that the report on the Erlin case was "the worst that he has ever seen."<sup>255</sup>

One would expect that the Erlin plan would enter a robust review, given the huge

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<sup>254</sup> See the mail respond from the water Bureau to local environmental group.

<http://antiictsp.wordpress.com/2010/02/19/>

<sup>255</sup> Taiwan Lipao, October 29, 2009.

environmental concern. Surprisingly, in November 2009, with many concerns and existing pollution complications, the EIA committee members made an unordinary decision. They still approved the Erlin plan with “nineteen” preliminary conditions, including establishing the health fund in Erlin. While some of the EIA members believed that it would be more appropriate to conduct a robust review, the chairman decided to let go of this case while he claimed that this decision was made by all EIA members.<sup>256</sup>

From the observation above, one noticed that the EPA’s function as a checking and deliberation mechanism was undermined when the state was determined to endorse a big investment. The bureaucracy in the EPA thus had to create an atmosphere in upholding it through the EIA procedure. Ironically, the AUO never officially promised to install the costly marine discharge pipeline, even in the EIA meetings.<sup>257</sup> Although Premier Wu promised it, the final decision of the EIA review (i.e., installing a long marine pipe to release wastewater from Erlin) was never officially affirmed by the AUO.

To sum up, both the Holi-Chixing and the Erlin cases suggested that the checking function of the EIA might be effective in the routine. However, when the powerful state leaders decided to take in charge, these checking institutions could

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<sup>256</sup> Taiwan Lipao, October 29, 2009

<sup>257</sup> According to the *EIA Act*, there is no such an institution as “experts meeting.” It was meant to create to skip EIA panels and committees when CTSP encountered unsolved water problem.



soon be marginalized. The Premier Wu led the state's resistance to the Supreme Court's order. With the support of Premier, the EPA and the CTSP office thus took a risk in challenging the court institutionally. This political intervention, to some level, deteriorated the function of the EIA committee.

### **Emerging Monitoring from the Judicial System and State's Counter Back**

In the CTSP cases, the EIA reviews on both the Holi-Chixing and the Erlin plans were eventually brought to the court as politicians tried to intervene in the review process. However, the Taiwan state tried to avoid this monitoring mechanism from resorting to the legal approach and constantly ignored the advice from the court. The neglect of court orders eventually contributed to a crisis of state's accountability.

The interventions from politicians in 2006 directly led to a reckless EIA review on the Holi-Chixing cases. The EIA committee approved the Holi-Chixing plan without asking the developer to conduct the necessary assessments. Due to this procedural flaw, environmental activists brought this case to the administrative court; arguing that the EIA review was incomplete since the AUO failed to conduct a health impact assessment. In 2007, the Taipei administrative court revoked the decision of the EIA review made by the EIA committee in 2006 and stated that the final EIA review made in June 2006 was invalid. Therefore, the construction of Holi-Chixing plan needed to be on hold until a final valid EIA review could be completed. However,

the EPA (under the DPP administration) decided to appeal instead of restarting a robust EIA review integrating a proper health risk assessment.

The EPA could have learned a lesson from this court verdict when reviewing the Erlin plan in 2009. In late 2009, the Erlin plan was expected to enter the second-staged review since there were great environmental risks. With the experience of the Holi-Chixing legal disputes, it seemed not legally appropriate if a robust review on the Erlin plan was not conducted before any final decision can be made in the EIA. However, the EIA committee still skipped the procedures and allowed the Erlin plan to be passed with political interventions. The environmental activists thus filed another administrative lawsuit on the EIA's misconduct on the Erlin plan.

In January 2010, after the Supreme Court reconfirmed the revoke administrative order on the Holi-Chixing plan, the EPA (under the KMT administration) still hesitated to stop the construction of the facilities. The EPA director, Shen, even held a press conference; condemning the judicial system's intervention into the EIA. He even commented that the court order from the Supreme Court was "meaningless."<sup>258</sup> The EPA officials gave three responses accordingly trying to evade the accountability.

First, the EPA claimed that Article 14 and 22 in the *EIA Act* should not be applied to the Holi-Chixing plan, since the principles of these two articles were

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<sup>258</sup> <http://e-info.org.tw/node/51842>

focusing on the developing activities “without any EIA reviews.” The EIA believed that there were at least some EIA reviews held in this case although they were revoked by the court years later. Therefore, the Holi-Chixing plans should not be applicable to these two articles, since the AUO did follow the EIA procedure. Shen even argued that the more proper law applicable to this situation would be *the Administrative Procedure Act*. According to Article 117 to 121 in this Act, developers had rights to request an administrative remedy if the liability was on the government.<sup>259</sup> From this perspective, the AUO did proceed the project based on a valid and legal permission (at that time), and thus their rights should be protected.<sup>260</sup>

Second, the EPA claimed that the fact that the review in 2006 was revoked by the court could not lead to the conclusion of stopping the developing activities. The EPA had the “rights to interpret the EIA Act according to different circumstances,” since this law was proposed by the EPA. The EPA could ask the AUO to submit more information and to conduct a robust review in the future reviews. In short, it was an administrative imperfection, not a procedural error. Therefore, the failure in completing an intact EIA review was irrelevant with the decision of stopping the Holi-Chixing plan.

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<http://www.cna.com.tw/ShowNews/Detail.aspx?pNewsID=201003180128&pType0=aSOC&pTypeSel=0>

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<http://www.cna.com.tw/ShowNews/Detail.aspx?pNewsID=201003180128&pType0=aSOC&pTypeSel=0>

Third, this developing project was under the jurisdiction of the NSC and the CTSP offices, thus the EPA was not a direct governing authority to the AUO regarding its developing action. The EPA was only responsible for holding the EIA review tackling environmental impacts. It was the NSC's call to decide whether the plans should be terminated or not.<sup>261</sup>

The EPA's statement was quite tricky: it insisted that investors' rights needed to be protected since they had followed the procedures, even the procedures were not completely followed. It claimed that any punishment against developers based on the court order made after the EIA reviews would intimidate investors from investing in Taiwan. The most important of all, it asserted that it was not the EPA's responsibility to make any decision regarding the developing behaviors after the approval. The EPA's officials even claimed that the EPA was considering filing a judicial review on the Constitution because of this case.<sup>262</sup> However, according to Article 22 in *the EIA Act*, the EPA was in fact legally obligated to notify the developer and to suspend the construction if the EIA review was not completed.<sup>263</sup>

In July 2010, to avoid further confusion, the Supreme Court clearly indicated

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<sup>261</sup> See the Press Conference held by Taiwan EPA. <http://e-info.org.tw/node/51650>

<sup>262</sup> Ibid.

<sup>263</sup> The Article 22 in the *EIA Act* says: "Those developers that, prior to receiving the authorization of the competent authority pursuant to Article 7 or Article 13, directly pursue a development activity in Article 5, Paragraph 1 shall be fined NT\$300,000 to NT\$1.5 million; for such a developer, the competent authority shall notify the industry competent authority to issue an order for the suspension of the implementation of the development activity. When necessary, the competent authority may directly order the suspension of the implementation of the development activity; for those that fail to comply with such an order, the statutory responsible person shall be punished by a maximum of three years imprisonment, detention and may be fined a maximum of NT\$300,000."

that both the Holi-Chixing and the Erlin plans “**needed to be stopped immediately**” because of their status of incomplete EIA reviews. The Supreme Court sent a very clear message to show their intention to hold the government accountable for their actions. However, the KMT administration still refused to comply with the court order. The Executive Yuan decided that both plans would “stop the construction, but continue the operation” in responding to the court’s order.<sup>264</sup> This was an intentional misinterpretation of the court order.

In September 2010, the EIA committee re-conducted a health risk assessment to complete the previous flawed EIA procedure. The EPA believed this late action would legitimize the state’s decision on the principle of “stop the construction, but continue the operation” on the Holi-Chixing plan. However, in March 2011, the Taipei Superior Court ruled that the new EIA review still did not go through the robust review as the EIA regulation suggested. Thus, given the fact that the developing actions may carry great environmental risks, the court ruled, “**there is a necessity to approve the suspension of any developing behavior in the designated site.**”<sup>265</sup>

This statement was like a direct punch in the face of the Executive Yuan.

The series of decisions made by the EPA aroused the anger of environmental groups and legal experts, because the EPA did have their chances to settle this issue at

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<sup>264</sup> Liberty Times, August 11<sup>th</sup>, 2010. <http://www.libertytimes.com.tw/2010/new/aug/11/today-t1.htm>

<sup>265</sup> CNA News, March 1<sup>st</sup>, 2011.

[http://rss.cna.com.tw/rss\\_topread.php?t=2&id=201103010222&class=JD&code=8cbf5ae0a8d168b0d9e63ae173033068](http://rss.cna.com.tw/rss_topread.php?t=2&id=201103010222&class=JD&code=8cbf5ae0a8d168b0d9e63ae173033068)

a lower cost. By following the court order in the beginning, the developer's rights could have been preserved since the construction did not begin at all. Besides, the EPA did have the power to reclaim their authority in supervising developing behaviors since they did have interpretative power on some articles in the *EIA Act*. Aside from fines or suspension of the projects, there was still a wide array of administrative measures that could have been done to protect the developer's rights without undermining the integrity of the EIA. However, from 2007 to 2011, there was no apology in the EPA's statements for their flawed review procedures, but a repetitive tone insisting, "This developing behavior could be continued."

Having said that, the court's order, though encountered strong resistance of the government agencies, still constitute a great constraint on the administrative branch. Anticipating a very long fight over both the Holi-Chixing and Erlin plans, the Taiwan government had to loosen the N-1 policy and to permit the AUO's investment in China. Also, the EPA also conducted reforms on the regulation on toxic substances as follows.

### **Increasing Regulative Capacity of EPA's on Free Information**

There were two-folds of environmental concerns on the Erlin plan. The first issue was about the control of toxic substances. While there were estimated more than four hundred kinds of toxic substances used in the AUO's future facilities, the AUO

only listed twenty of them in the EIA report.<sup>266</sup> It even refused to conduct an environmental impact assessment on its toxic substances because the AUO claimed that “there would be no influence on local environment.” Nevertheless, this was not an isolated case. The AUO’s failure to manage toxic substances could be traced back from 2006 to 2008. From 2006 to 2010, the monitoring from the EPA and environmental groups on the corporation’s social responsibility has improved, based on their learning through the EIA procedures.

In the EIA review on the Holi Plan in 2006, the developer was asked to conduct a health risk appraisal “before the operation” with a condition that the operation of facilities must stop immediately if this assessment failed to pass. However, while the developer ignored this condition, the health risk assessment conducted by politicians suggested that more than twenty percent of the local residents were found poisoned by Dioxin.<sup>267</sup> The failure of conducting health risk assessments before the operation by the AUO thus was proven influential.

In 2008, there was another event posing challenges on the EPA’s capacity to counter business interests in protecting public health and free information. In June 2008, the residents in Hsinchu County testified that the water in Hsiaoli River was seriously contaminated. The EPA concluded that the AUO’s facility in Hsinchu was

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<sup>266</sup> [http://gaea-choas.blogspot.com/2009/10/blog-post\\_1848.html](http://gaea-choas.blogspot.com/2009/10/blog-post_1848.html)

<sup>267</sup> Nevertheless, the EPA never suspended the operation of the facilities in the Holi plan. [http://gaea-choas.blogspot.com/2010/01/blog-post\\_24.html](http://gaea-choas.blogspot.com/2010/01/blog-post_24.html)

partly responsible for this pollution. This facility, along with Chunghwa Picture Tube Company, has contaminated the river for seven consecutive years. Ironically, these two companies had promised, before the EIA reviews, that they would set up emitting pipes “below” the drinking water intake point, in order to protect the quality of drinking water. However, the evidence showed that they actually broke their promise and set up the pipe “above” the intake point, which was the reason leading to water contamination. Because of this deed, there have been more than three thousand lives threatened by contaminated drinking water.

Because of this event, the EPA had to change the water treatment standard in 2009<sup>268</sup> because the toxic ingredients (“indium” and “molybdenum”) were not even listed in the EPA’s toxic substance list.<sup>269</sup> However, the EPA still had no idea why the other two toxic substances (PFOS and PFOA) existed in the river, because the AUO would not reveal its production process.<sup>270</sup> The Hsiaoli event has proved that the EPA was unable to monitor the toxic waste if the corporations wouldn’t provide correct information about production process and waste disposal in the name of “business secrets”. Although the EPA issued fines on both corporations, the amount was insignificant to these giant corporations.<sup>271</sup>

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<sup>268</sup> UDN News, September 13 2009.

<sup>269</sup> Because the corporations in high-tech business are reluctant to release any information about the raw material, out of the concerns of business secret, the government did not know these materials has been used for panel manufacturing.

<sup>270</sup> From Pots Weekly, <http://www.pots.com.tw/node/3636>.

<sup>271</sup> For this serious pollution, the EPA issued AU Corporations a fine for only less than twenty



Based on this weak governance on information release, the court found it very crucial in conducting health risks assessments in public. The EIA review on the Chixing plan was voided by the court was mainly because that the information on toxic release remained in a black box. In fact, in the public hearings and health risk conferences held in the local area in 2007, the EIA members stated that they were incapable of reviewing the issue of water discharge because “there was nothing to be reviewed in the report.” The AUO did not provide information about water emission to be reviewed.<sup>272</sup>

In the review process on the Erlin plan, these dreadful environmental records regarding toxic substance management by the AUO induced the suspicion of the EIA committee. With the pressure that the Erlin plan had to pass the EIA review by the deadline, the EIA members had to list most concerns as conditions if the result was given. In other words, the “conditional approval” actually indicated unsettled environmental disagreement in the EIA review process. The “nineteen” conditions in fact revealed that the EIA committee’s only hope is “to monitor in the future.” However, with the appalling environmental records in Hsiaoli and Holi, one seemed hard to be optimistic toward the government’s monitoring practices on the Erlin plan. A successful “conditional approval” would be highly based on the AUO’s willingness

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thousand US dollars. (0.6 million NT)

<sup>272</sup> This proposition was proposed by Dr. Tu in the conference session held in Legislative Yuan in March 18, 2009, and recorded by an environmental journalist. [http://gaea-choas.blogspot.com/2010/03/blog-post\\_18.html](http://gaea-choas.blogspot.com/2010/03/blog-post_18.html)

to comply with their previous environmental commitments made before the EIA reviews. However, the AUO's action was obviously not the case.

Nonetheless, owing to the lawsuits filed by the environmental activists, the EPA began to pay attention on regulating the toxic substances in the black box. In order to cause similar legal conflicts, in April 2010, the EPA imposed the "*Technical Codes on Health Risks Assessment*." This act asked the developers to report **all** possible toxic substances, which will be used during manufacturing process to the EPA and local public hearings. If the developers choose to conceal the information, the EPA could order the developer to restart the health risk assessment or impose fines on the developers if the developing actions have already been completed. Although the monitoring afterward by the EPA remained challenging, **this was a beginning in enhancing people's rights on the information and extending the state's environmental governance on corporations.**

Having said that, the environmental groups were still unsatisfied with this new act and complained that the existing local pollution was not included into this evaluating system. The EPA director asserted that this new act was imperfect, but he refused to the revise this new act because it was highly associated with "political interests among stakeholders<sup>273</sup>". His attitude indicated the fact that political interests

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<sup>273</sup> PNN News, December 15, 2010. <http://pnn.pts.org.tw/main/?p=17271>

on the EPA were still huge and thus every reform requires political compromises.

In addition, the self-protection feature of bureaucracy also made the EPA more inclined to deny hidden risks behind those projects. In Hsiaoli event, the EPA officials announced in public that the aqua-biology in the Hsiaoli River was “normal as it used to be<sup>274</sup>,” without mentioning the fact that the EPA had to send drinking water to Hsiaoli in 2008. Furthermore, the EPA’s announcement even concluded that “there never had been any serious pollution jeopardizing life quality in neighborhoods around all operating scientific parks in Taiwan.”

These events suggested that the progress of EPA’s accountability in regulating toxic waste, though valuable, was still limited. It was the public monitoring via the EIA review driving this reform on policy transparency. Had not been the lawsuits against the EPA in both CTSP cases, the reform would not have happened.

### **Experts Meetings: Two-Faced Sword**

Starring from 2008 in Shen’s term as EPA director, he decided to adopt a supra-institutional mechanism: “the experts meetings.” From the EPA’s perspective, the purpose of experts meetings was to narrow the gap between the AUO and the EIA committee when feasible solutions were not handy. In order to close the gap, the EPA invited more experts to attend the meetings and tried to find a solution breaking the

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<sup>274</sup> See Liberty Times, November 3<sup>rd</sup>, 2009, <http://www.libertytimes.com.tw/2009/new/nov/3/today-o9.htm>

gridlock. Since “the experts” might provide extra knowledge in guiding the developer to reduce environmental impact, it theoretically could be a useful method even if the developers and the EIA committee could not reach agreement. The experts could offer their expertise particularly when the developers were incapable of conducting relevant research by themselves. The other institutional advantage of conducting these meetings was to have the developers’ proposal reviewed without the risk of being officially denied by the EIA members. In this occasion, a wide array of solutions can be discussed. The consulting company and the developers would have more opportunities to correct possible mistakes.

There was also another purpose for the EPA to hold the experts meetings. Since public participation in the official EIA procedure was somehow restrained in order to facilitate the review after the EPA set limitation on public auditing, the experts meetings may serve as an outlet for public grievances. This platform may be considered a preliminary session of EIA in terms of shaping consensus for debates in depth.

Nevertheless, the experts meetings **could also be a big loophole** if the state intended to maneuver this mechanism. Institutionally, the experts meeting was not a legally binding procedure within the EIA reviews, but rather an internal administrative measure listed in the EPA internal code. That is to say, the experts

meetings were not part of the EIA officially. The grey area made this mechanism more available for politicians to manipulate. If the developer had no intention to be socially responsible, simply working on narrowing the gap of expectations and finding out a halfway solution was not adequate. The halfway solution from the experts meetings might ignore the great picture of social accountability, for it only concentrated on searching technical solutions to survive the given developing agenda.

Moreover, due to the unofficial feature of the experts meetings, the selection of participants was solely upon the EPA's call<sup>275</sup>. The EPA was authorized to invite supportive governmental agencies and local politicians, with their consent, to participate in the meetings. While environmental groups were also invited, they could become a disadvantage minority among interest-driven stakeholders and supportive governmental agencies. In addition, the character of "experts" may, to some extent, exclude the participation of local residents, while they were the most direct victims. In consequence, this elite-centered arrangement would dilute the monitoring from the EIA committee and local residents.

In the CTSP case, the "experts meeting" was a supra institutional channel when the institutional channel of the EIA fail to meet the state's demand. While facing questioning and criticism from some EIA members in "the experts meetings" held by

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<sup>275</sup> The local communities and environmental groups were allowed to send lists of experts they recommended or trusted, but the EPA made the final call.

the EPA, Ye Junghong, the head of the Comprehensive Plan Agency in the EPA, spoke up:

*“In the experts meeting, let’s assume that the Erlin plan “has to be done,” and assume that it “has to emit waste water to somewhere.” We can not make it nowhere to go”.*

From Ye’s statement, one can see that this mechanism may create a loophole in the government’s accountability, since the conclusions can be made by those experts without being held accountable. The experts meetings have turned the EIA members into a technical advisory group that guided the developer to pass the forthcoming EIA review. In fact, after the first practice of the experts meetings on the TNP upgrade plan (the Third Naphtha-cracking Plant) in 2008, environmental groups had lost confidence to this supra-mechanism. One of the officials on MOEA described that:

*“The experts meetings had helped to facilitate the EIA process in the TNP plan. However, after that, the environmental groups had recognized the tricks we had played in the experts meeting. They started to paralyze the experts meetings by making speeches in succession. Ever since that, there is no use for the experts meeting. (Quoted from a MOEA official)”*

In sum, the experts meeting can be a platform to shape social consensus and to broaden deliberation in the EIA. However, it can also become a supra-channel

averting institutional monitoring. Unfortunately, The experts meeting in the CTSP case appeared as the latter, since the EIA report was approved in a very haste way.

## **Conclusion**

The legacy of the developmental Taiwan state still functioned while the state tried to nurture and develop the TFT sector as a new star from 2002. With the intention to control the capital from this sector, the MOEA decided to use the Erlin plan in trade of the capital migration of Taiwan's TFT sector to China. The investor, the AUO, had to make promise to Taiwan state in realizing the Erlin plan, of which the destiny still uncertain, in 2010.

The demand of Taiwan's MOEA was proven somehow inefficient and risky, since the profitability of this sector was declining. While some experts suggested that a certain structural adjustments should be made in improving this sector's competitiveness, the MOEA in Taiwan decided to promote more productivity in this sector in stimulating GDP growth.

The long struggle in the EIA review process on both of the AUO's domestic investments reflected the fact that both plans might be inefficient since both the internal and external costs would over cede possible gains. However, with the myth of scientific park prevailing in the local counties, the Taiwan state adopted expedient measures to reduce public participation and finally had both the Holi-Chixing and

Erlin plans approved by the EIA committee. However, this strong manipulation of laws and EIA rules triggered the resistance from the civil groups. The environmental groups filed the lawsuit against the EPA and acquired a milestone victory. The court finally ruled that the EIA reviews on both plans were invalid since health risk assessments were missing in both reviews.

The EPA and the central government decided to confront against the judicial review by making appeals. These attempts to avert the monitoring from the court and the public eventually failed in August 2010 when the Supreme Court overruled the EPA's appeals. The court then ordered both plans to stop because of their flawed EIA procedure. Acknowledging that there was still great uncertainty in the future EIA on the Erlin plan, the Taiwan state decided to let go of the AUO's investment in China in December 2010.

Those facts suggested that the public checking mechanisms based on the EIA reviews effectively corrected the deficiency in MOEA's policies. Although dominant political leaders promoted both plans by intervening in the checking mechanism, the lawsuits against the procedural flaws in the EIA review eventually prevented the state from wasting more public and private resources on delaying capital outflows.

During these struggles, the massive participation and activists' strategy in adopting legal lawsuits improved the government's accountability. Chang's



restructure of EIA committee in 2005 indeed had a very profound impact on state's policy, since the environmental groups gained expertise from being a part of the EIA mechanism. This expertise allowed the environmental group to pin on legal flaws and to launch social campaigns at relatively optimal time<sup>276</sup>. Not only the MOEA and the NSC had to re-evaluate the cost-effectiveness of their policies, the EPA also started to ask the corporations to release more information on toxic substances while conducting health risks assessments ever since the court made verdict. This strong civil participation into the checking mechanism helped to correct the state's unproductive plans and to create an opportunity for the developmental state to adapt and learn. That was precisely one of the profound effects rising from democratization.

In conclusion, democratization opened access for civil groups and also brought changes in the EIA system. The inclusion of grassroots activists in the EIA committee produced a very influential outcome by creating public monitoring and deliberation. This mechanism not only corrected the state's decision flaws but also held the government accountable for its industrial policy on the LCD sector.

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<sup>276</sup> Su's interview with the EIA members also confirmed this fact. See Su Sany-Ying (2008), *Ibid*, pp167.

## **Chapter 5 the Eighth Naphtha-Cracking Plant (ENP) of Guoguang**

### **Petrochemical Company**

#### **Introduction**

The petrochemical industry has been a key sector for Taiwan since the MOEA began intentionally developing this sector from 1970s, for this industry was the foundation of Taiwan's industrial chain. From the 1990s onward, several companies of Taiwan's petrochemical industry have been considering migration to China, given the cheap costs of labor and land across the strait. In the meantime, the high amount of pollution caused by the petrochemical industry has made it a public enemy. The migration was quite reasonable since it was getting increasingly difficult for the petrochemical industry to establish new facilities in Taiwan.

Before 1990, the petrochemical industry was mostly dominated by China Petroleum (CP afterwards, a SOE); for this SOE had been a sole supplier of ethylene, the product brought by naphtha-cracking. In 1989, the Taiwan government approved a grand naphtha-cracking facility, the Sixth Naphtha-cracking Plant (SNP), by the Formosa Group, to stop the Group's ambition in building a petrochemical empire in China. This grand plan broke the monopoly in petrochemical business. With the rapid growth of SNP's productivity and relevant facilities, Formosa has surpassed the CP and become the top provider of petrochemical products since 2003.

In contrast with Formosa's smooth growth, the CP's operation in petrochemical business has been deteriorating. Several crucial facilities were forced to shut down around 2010 due to generating high levels of pollution. Many downstream petrochemical firms under CP's supply system were quite anxious about the decreasing productivity from CP, and planned to stabilize their supply chain by requesting that it establish new facilities. However, due to the character of SOE, the CP's investment projects were quite inflexible. These private petrochemical firms thus decided to set up a joint company with CP, Guoguang Petrochemical (GP afterwards), to avoid the inconvenience of CP's SOE role. GP was created to conduct more efficient investments without complying with the rigid rules of SOE.<sup>277</sup>

The GP decided to restart a plan of building a new naphtha-cracking facility, the amount of investment of which was 40.5 billion NT dollars in Taiwan.<sup>278</sup> It was also referred as the "Eighth Naphtha-cracking Plant (ENP plan afterwards)" In fact, this plan was initiated far from the 1990s and mostly was driven by the CP's need to build new plants to replace highly polluting outdated facilities. (For example, the Fifth Naphtha-cracking Plant in southern Taiwan was forced to shut down in 2012)

However, due to the strong resistance from local communities in different counties,

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<sup>277</sup> China Petroleum consisted of 48% of share of bonds. The reasons that the CP created a joint company, GP, to compete with the Formosa Group were as follows. First, as an SOE, China Petroleum was monitored by MOEA policies and therefore lacked flexibility responding to market fluctuation. Second, China Petroleum had the obligation to fulfill social services in the domestic market, and the products were mainly for domestic supply, with fixed price.

<sup>278</sup> The plan also included 1 refinery, 1 naphtha-cracking plant, 23 downstream petrochemical facilities, 14 cogeneration facilities, and 13 industrial piers. It is a very huge plan.

the CP could not find an appropriate site to start this project until 2004. The original plan in 2004 was to start this plan in an “off-shore island industrial complex” in Taisi, Yunlin County. After four years, the GP was forced to transfer this plan to Dacheng, Zhanghua County, because of some business struggles and the concern of environmental capacity.

In June 2008, vice president, Hsiao, hosted the stockholders of GP and promised that the ENP plan would be a “must be.”<sup>279</sup> He “promised” that the EIA review for the ENP would pass in 2009<sup>280</sup>, which was a very bold claim considering that the EIA committee was under an independent operation. In March 2009, the MOEA officially approved this plan, which meant that this plan was ready to begin if GP’s proposal could be approved by both the EIA review and the APC review committees.

From 2008-2010, the Taiwan state leaders were quite concerned with this huge plan. President Ma admitted that the ENP was a major national goal since Taiwan “cannot afford to lose the petrochemical industry.”<sup>281</sup> Ma’s attitude was very consistent with most of Taiwan’s political leaders during 2004-2010; the ENP plan was a necessary infrastructure that Taiwan must develop in the very short run.

However, passing the EIA review for the ENP plan has been a great challenge

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<sup>279</sup> He asked the cabinet member, Chu Yunpeng, to conduct necessary coordination in achieving final success, and himself will personally play a “volunteer” in pushing this project in order to get rid of the laggard image of the government.

<sup>280</sup> <http://www.cooloud.org.tw/node/25781>

<sup>281</sup> China Times, September 1<sup>st</sup> 2010, <http://news.chinatimes.com/focus/0,5243,50106434x112010090100424,00.html>

for the GP during 2006-2010. The ENP plan had encountered difficulty in convincing the EIA members on both their plans in Yunlin County or Zhanghua County. Many EIA members suggested that the EIA report sent by the GP was “sloppy and arrogant,” since the GP failed to list possible negative impacts on soil and water quality in nearby coastal areas.

Because the GP did not make satisfactory progress on the EIA report, the ENP plan thus could not go any further toward preliminary construction.<sup>282</sup> Recognizing that the ENP plan might not be able to start before 2011, the Petrochemical Union decided to play hardball with the government. In May 2010, the Union threatened that the private shareholders of GP would drop this plan if the government failed to provide an effective solution by June 2010, implying that the state must “take care” of the upcoming EIA review in order to keep this investment. Some involved petrochemical firms were quite unsatisfied with the slow progress of the EIA review and threatened to transfer their capital to China.<sup>283</sup> Owing to these pressures, the state thus tried to intervene with the EIA reviews again.

However, with the previous experience of the CTSP lawsuit, the MOEA behaved more moderate this time. The MOEA has realized that conducting an EIA on “petrochemical policy” before conducting EIA reviews on specific developing actions

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<sup>282</sup> [http://www.shadowgov.tw/33578\\_0\\_is.htm](http://www.shadowgov.tw/33578_0_is.htm)

<sup>283</sup> The shareholders complained that while a similar procedure only took four months in Singapore, the EIA reviews in Taiwan lasted more than four years and the final outcome was still unclear. See PTS News. [http://web.pts.org.tw/php/news/pts\\_news/detail.php?NEENO=147916](http://web.pts.org.tw/php/news/pts_news/detail.php?NEENO=147916)

would better achieve the final success of ENP. In December 2010, the MOEA delivered a first version of the “EIA Report on Taiwan’s Petrochemical Industry”, illustrating that the state’s industrial policies, rather than sporadic developing actions, could be better monitored by EIA reviews.

### **Politics of the ENP Plan**

After the establishment of SNP in 1990s, the private-owned Formosa Group has dominated the petrochemical realm in Taiwan. The Taiwan government had a deep fear that the powerful Formosa Group would jeopardize the government’s capacity of controlling petrochemical industry, because the Formosa controlled most of the downstream petrochemical industries in Taiwan. In order to facilitate the competition in this market, the state tried to maintain a balance of power between the Formosa Group and the GP. If Formosa acquires the monopoly of the petrochemical market, the downstream industries would be taken over since they will be highly dependent on the Formosa Group, since CP has ceased to remain a viable provider of petrochemical raw products. The dominant status of the Formosa Group in the petrochemical industry would seriously reduce the government’s bargaining power with this big corporation.

**Table 5.1 The Monopoly of the Formosa Group after 2015 (based on the production now)**

	Gas (barrels per day)	Ethylene (tons per year)
CP's Fifth Plant	220,000	500,000
China Petroleum (without the fifth plant)	500,000	950,000
Formosa Group	550,000	3120,000

Source: Compiled by the author<sup>284</sup>

Therefore, the state-owned China Petroleum has to keep up with the Formosa Groups to meet government's expectation. In order to shape an effective competition, the CP created an alliance among domestic medium-sized petrochemical firms outside the Formosa system. This "health competition" between CP and the Formosa was the ultimate goal of the ENP plan.

For the GP, the establishment of ENP was an urgent issue, since the outdated facilities might retire soon, particularly with the Fifth Naphtha-cracking Plant (FNP). The FNP in Kaohsiung has been a public hazard in Taiwan, because of its dreadful environmental impacts on the local neighborhood. There has been a long series of environmental protests starting from 1980 against this facility, because of the serious pollution caused by frequent industrial accidents. The CP thus had to pay a considerable amount of compensation to the local residents. In order to pacify local grievances, in 1990, the state announced that this facility would be removed from it

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<sup>284</sup> <http://www.libertytimes.com.tw/2008/new/apr/25/today-life8-5.htm>  
<http://www.nownews.com/2004/03/30/331-1608520.htm>

original location in 2015. If the GP failed to start the ENP plan before 2010, the dismantling of the FNP would lead to CP's serious failure in the competition against the Formosa Group. Therefore, in order to maintain the "balance of power" between both corporations, the MOEA and the CP both needed the ENP plan to start as soon as possible.

### **The 13+1 ASEAN System and the Threat of Capital Outflow in the Petrochemical Industry**

According to the estimation of Taiwan's MOEA, the exportation to China of Taiwan's petrochemical products consisted of 63.7% of the total petrochemical goods produced in Taiwan.<sup>285</sup> China, without a doubt, has increasingly become the focus of Taiwan's petrochemical business. In order to seize the market in China, some major petrochemical industries in Taiwan have already planned to migrate to China. In 2010, the new relationship between Association of Southeast Asian Nations (ASEAN) countries and China also strengthened this force.

From January 2010, the 13+1 framework of ASEAN started to be effective. Most products exported from ASEAN countries to China, including from Korea and Japan, started to receive zero-tariff treatment because of the "early-harvest" measures. With the enlargement of ASEAN, the exclusion of Taiwan from this framework would

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<sup>285</sup> <http://www.ecfa.org.tw/ShowNews.aspx?id=966>



make the products from Taiwan less competitive in the Chinese market. Among the industries in Taiwan, textile, mechanical, and petrochemical industries in particular would be most negatively impacted, because of their “upstream” features. These industries primarily ship semi-manufactured materials to downstream manufacturers in China, and finally exported finished goods overseas.<sup>286</sup> The Petrochemical Union in Taiwan indicated that with the new 13+1 ASEAN framework being effective in 2010, the Chinese market share of petrochemical goods produced from ASEAN countries would grow from 30% to 60%, since Taiwan goods are subject to an extra tariff of 6.5%, on average.<sup>287</sup>

While a domestic demand for petrochemical products in Taiwan has already been fulfilled, most of the petrochemical products were manufactured for exportation. Among the global markets, China appeared to be the most significant one for the Taiwan petrochemical industry. Considering the ASEAN factor, some of Taiwan’s petrochemical firms believed that it would be more effective to set up manufacturing facilities in ASEAN countries than in Taiwan, since Taiwan was excluded from this 13+1 framework. According to the estimation of Taiwan’s MOEA, the annual exportation of petrochemical products, up to 360 billion NT dollars, to China, would be very difficult to “digest” if the petrochemical firms failed to control Chinese

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<sup>286</sup> Comment Article from cabinet member Chu Yun-peng.  
<http://udn.com/NEWS/OPINION/OPI4/5240157.shtml>

<sup>287</sup> China Times, January 9 2010. Please see:  
<http://n.yam.com/chinatimes/fn/201001/20100109890614.html>

market.<sup>288</sup> In other words, the petrochemical industry in Taiwan would encounter serious problems if no prompt action were adopted in response to the ASEAN's expansion.

### **Could the ECFA help? Maybe Not**

The Economic Cooperation Framework Agreement (ECFA) is a bi-lateral economic agreement between China and Taiwan. With the KMT's win in the presidential election in 2008, the cross-strait relations had cooled down. Through several rounds of negotiations during two years, both sides have prepared to sign this agreement in 2010. Although the DPP has opposed this agreement, both countries officially signed this agreement in June 2010. This agreement would increasingly open Taiwan and China's domestic markets to the other side, which means to allow the products manufactured on the other side to enter domestic market at a very low (or even without) tariffs.

The ECFA has a tremendous impact on the petrochemical business, and the Taiwan government also considered it as a quick dose in solving capital outflow problems. The signing of ECFA with China would offset Taiwan's disadvantage in the petrochemical industry and allow these industries in Taiwan to gain an equal status in Chinese market after the 13+1 framework takes effect. With the ECFA, the status of

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<sup>288</sup> The announcement from MOEA on April 12, 2010.  
<http://dailynews.sina.com/bg/chn/chnoverseamedia/cna/20100412/02221338654.html>

“upstream Taiwan” combined with “downstream China” in the petrochemical sector may be further guaranteed by this new economic agreement. Therefore, for the Taiwan side, the petrochemical industry was listed as the top priority for tariff-reducing items in the “early-harvest” list during the ECFA negotiation.<sup>289</sup> Ever since the negotiation started, the deal on the petrochemical items has been a very hot topic, since both sides had their calculations in developing petrochemical industry.

In fact, the migration of the Taiwanese petrochemical industry to China has been a new trend in cross-strait relations. On the one hand, the growing costs for lands and labors in Taiwan have been driving the corporations away. On the other hand, the Chinese government has built a petrochemical industrial complex in Quangan (Fujian) in the Haisi Special Zone to rigorously develop petrochemical industry. Under this circumstance, the Taiwanese petrochemical sector has become a bargaining chip in this cross-strait struggle.

For the Taiwan side, fearing the future competition with China, the Taiwan government refuses to approve the petrochemical industry’s investment on any naphtha-cracking projects in China, just like the LCD industry. The Formosa Group once tried to develop a huge “Haicung plan” in 1989 in building a special industrial zone on petrochemical industry in China. However, the Taiwan government adopted a

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<sup>289</sup> Refer to the MOEA announcement. <http://w2kdmz1.moea.gov.tw/user/news/detail.asp?id=19516>

“stick and carrot strategy” to block this plan. In this decade, the Taiwanese investment in upstream petrochemical facilities in China also required permission from Taiwan’s IRC. Due to this limit, Taiwan’s petrochemical industries could only launch downstream-level projects in the Haisi Special Zone.

The ECFA appeared as a good opportunity to alleviate the grievances from Taiwan’s petrochemical sectors. If the tariff-reducing measures between China and Taiwan can be imposed on the petrochemical products produced in Taiwan, it would stabilize the petrochemical sector from moving to China. However, the Chinese government had their own agendas and was particularly concerned on breaking the current power balance between the petrochemical businesses across the Taiwan Strait. In order to keep the petrochemical industry chain under domestic control, the Chinese government only accepted joint-venture projects incorporated by Taiwan petrochemical industries and local Chinese medium-sized plants, particularly the naphtha-cracking facilities. Instead of only receiving some parts of Taiwan’s petrochemical industry, the Chinese government insisted that Taiwan petrochemical industries must move the entire supply chain to China. To put this differently, the Chinese government wanted to put this sector under state’s full control. By setting above limits, China could develop their own petrochemical businesses with the assistance of capital from Taiwan, but not constrained by Taiwan’s petrochemical

firms in the future.

China's intention to develop petrochemical products in an independent manner thus led to China's reluctance in opening the market to Taiwan's petrochemical products. There were two events suggesting that the Taiwan's petrochemical sector was facing animosity from China. First, after the ECFA was finalized in June 2010, China eventually decided that ninety percent of the petrochemical products manufactured in Taiwan would not receive zero-tariff treatment from China, mostly because of the great pressure from China's petrochemical sector. Second, China's government also officially rejected the possibility that allowed Taiwan's petrochemical firms to operate naphtha-cracking plants in sole proprietorship, for this upstream source had to be tightly controlled by the Chinese state. Chinese government delivered a clear statement in April 2010 and insisted that Taiwan's naphtha-cracking projects had to incorporate with Chinese industries if they would like to move to China.<sup>290</sup>

The Taiwan's petrochemical industry thus encountered dilemma. On the one hand, Taiwan government seems incapable of providing the resources they need if they chose to stay. On the other hand, migrating to China did not only mean they would conflict with Taiwanese government directly, but they would also have to surrender

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<sup>290</sup> China Times, May 4, 2010.  
<http://news.chinatimes.com/mainland/0,5245,50503524x112010050400498,00.html>

their autonomy to the Chinese petrochemical industry. It might seem risky to hand over their autonomy and entire supply chains to the China government, though the Chinese government could provide a bigger market and cheaper lands for building new plants. Because the Taiwan government prohibited the outflow of both capital and technology to China unless those firms initiated equivalent investment in Taiwan domestically, it posed a serious problem to Taiwan's petrochemical sector since the most significant investment, ENP, cannot start in near future. The announcement from the Petrochemical Union in pushing the ENP plan was actually an ultimatum to the Taiwan government stating, "Handle the EIA, or let us go to China." Therefore, the state encountered a challenging task because the state officials had to handle the EIA reviews filled with opposing opinions within it, but at the same time, they also had to placate the anxiety of private capital.

### **The State's Autonomy**

Did the Taiwanese government lose their autonomy because of strong pressure from domestic firms? Some facts revealed that the state retained strong autonomy over the corporations.

### **The Ban on the Petrochemical Industry's Migration to China**

As described above, being afraid that Taiwan would lose control over petrochemical products in the Chinese market, the Taiwan government prohibited

Taiwan's petrochemical sector from investing naphtha-cracking plants, the upstream foundation of petrochemical industry, in China. This ban was focused on the naphtha-cracking facilities only, and it only covered twenty percent of whole industry. Because naphtha-cracking facilities were the upstream segments, the separation of naphtha-cracking facilities from other petrochemical firms was costly. Therefore, if Taiwan's petrochemical sector sets up major naphtha-cracking facilities in China, the whole petrochemical industry, which operated in cluster, will be forced to migrate with the upstream facilities in order to reduce the costs in transportation and uncertainty. Therefore, the Taiwan state would like to guarantee that Taiwan still manages to get a piece of pie if the migration is inevitable.

In October 2009, the MOEA announced that the naphtha-cracking facilities were allowed to go to China "after" the ENP starts in Taiwan.<sup>291</sup> In other words, the precondition to lift this ban was to start the ENP plan in Taiwan first. Like the "N-1" policy on the LCD industry, which used the Erlin and Holi-Chixing plans as bargaining chips, the petrochemical industry was also asked to fulfill "their duty" in Taiwan. This time, the bargaining chip was the ENP plan.

The petrochemical industry in Taiwan was not excited about this decision. The biggest reason behind those grievances was the asymmetric analogy between the

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<sup>291</sup> Wealth Magazine, Vol 332. <http://www.wealth.com.tw/index2.aspx?f=301&id=816&p=1>

LCD and petrochemical industries. While the semi-conductor and LCD industries both possessed the advantage of leading technology in Taiwan through establishing R&D departments in Taiwan, there was no technology secrets on naphtha-cracking facilities in petrochemical sector, because both Taiwan and China could easily acquired this technology from elsewhere. There were no business secrets or critical technological advantages to be protected in this ban but only capital. Thus, Taiwan's petrochemical industry believed that it made very little sense to use the ENP as a threshold in blocking the migration of the petrochemical sector.

Furthermore, while Taiwan's petrochemical industry started to lose an advantage in the Chinese market, this industry was actually demanding the government's assistance, not regulations, in negotiating with China. As the previous paragraph described before, foreign companies were not allowed to establish naphtha-cracking facilities in China without a joint-venture form incorporated with Chinese local petrochemical companies. It was not a desirable outcome for the Chinese government if the sources of raw materials were dominated by foreign capital, because China had begun to develop and protect this sector. Therefore, the Taiwan's petrochemical industry was hoping that the Taiwan state would press China to loosen this regulation. They even suggested that the petrochemical industry should be bundled with other industries possessing technology advantage in the cross-strait negotiations of ECFA in



order to acquire a tariff-free status for Taiwan's petrochemical products in China.<sup>292</sup>

While the leaders of the petrochemical industry used harsh comments such as "brainless" in describing this bargain between the Taiwan state and petrochemical sector, the MOEA still insisted on their own agenda. For the MOEA, holding naphtha-cracking facilities in Taiwan was an important strategic action to respond to the rapid development of Chinese petrochemical sector. The MOEA believed that this threshold was necessary because China had forced Taiwan's petrochemical sector to accept joint-venture management. In fact, most Taiwan petrochemical industries had acquiesced to this principle. Among them, even the toughest Formosa Group has stated that the company was considering accepting this term set by the Chinese government. While the Formosa Group often operated in single-venture form in Taiwan and elsewhere, the company's position was eventually shaken in 2010.<sup>293</sup>

If the Taiwanese firms accepted this term, the migration of naphtha-cracking facilities to China would cause fragmentation in Taiwan's domestic supply chain. If there was no more new investment on naphtha-cracking project in Taiwan, the Taiwanese petrochemical firms, no matter operate in China or Taiwan, would inevitably be controlled by Chinese suppliers.

Therefore, the MOEA decided that Taiwan needed to regulate this fast capital

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<sup>292</sup> Economic Daily, September 30, 2010.

<sup>293</sup> Economic Daily, March 20, 2010, Editorial.

outflow and to create an intact petrochemical supplying system in Taiwan. By holding the ENP in Taiwan, Taiwan's petrochemical sector could be well-protected.<sup>294</sup> Therefore, no matter how hard the Petrochemical Union criticized against the MOEA's policy, the MOEA and the Executive Yuan still insisted on this principle. The strong position of Taiwan government in regulating the capital outflow in petrochemical sector clearly revealed the strong autonomy of the Taiwan state.

### **The Penetrative Power**

During 2004-2008, the ENP plan in the Taisi had remained unsettled, because this plan failed to pass the robust EIA review. In 2008-2009, the shareholders behind of petrochemical industry expressed their impatience after paying several visits to Premier Liu. The petrochemical sector asked the government to give a clear answer on the EIA review within one year; otherwise they would ask the government just to lift this ban on capital outflow, since China has already designed a petrochemical industrial site in Haisi, Fujiang. In response to the pressures, the KMT administration decided to speed the administrative procedures on the ENP plan. However, there were some challenges ahead.

### **Ineffective Penetration to the Investor**

The biggest challenges of the ENP plan were "review systems" in both the EIA

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<sup>294</sup> CTS News, <http://news.cts.com.tw/cna/money/200912/200912140364148.html>

and the APC committees. The EIA review for the ENP plan in Yunlin lasted for four years (2004-2008). Even when the GP changed the plan site to Zhanghua, the progress in the EIA remained slow. Therefore, the petrochemical industry kept urging the government to take a serious position on this time-consuming review.

Instead of the EIA or the APC reviews, the one who needed to be responsible for the time delay seemed to be the GP, because the latter failed to meet the demands of EIA committee. For example, the operation of ENP plan would require a massive reclamation of coastal area in both the Yunlin and Zhanghua counties. This activity would pose a great impact to the marine ecosystem and local fishing agriculture after the reclamation. However, during the EIA reviews, the EIA committee members were quite disappointed with GP's proposals. In the EIA meetings held from April to July 2010, the GP failed to conduct relevant research or provide basic parameters in estimating possible negative impacts brought by the ENP plan. Some EIA member stated that the GP's EIA proposal on the ENP plan was the "worst one in this decade." Not only did the corporation cheated on data in marine ecosystem, neither did the GP address possible environmental impacts or solutions on future coastal reclamation. The EIA members therefore concluded that the GP's report was "sloppy", "arrogant," and "inattentive to the environment."<sup>295</sup>

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<sup>295</sup> <http://e-info.org.tw/node/53787>

Nonetheless, facing criticism from the EIA committee, the GP claimed that it was the government's responsibility to conduct research on the health risks of local residents or wild species threatened by this project. The GP believed that the developer was not obligated to provide relevant research results<sup>296</sup>, and this mindset exactly proved the GP's arrogance in front of the EIA committee.

**Table 5.2 the GP's Failures in Being Socially Responsible**

Dishonest data	GP claimed the scale of ENP would match up with the Formosa's SNP plan, but the CO2 emission will only account for 33% of the CO2 emission from the SNP. Since the GP does not have any better technology in reducing CO2 emission, the statement was a lie.
Fake Arguments	The GP claimed the ENP could improve the problem of land subsidence in the Zhuoshui riverbank, but the establishment of this water-consuming facility in this water-scarce area may suggest just the opposite.
Failures to Comply with EIA Rule	The GP refused to conduct submarine photography to observe the newly-claimed coastal land.
Intentional Negligence on Local Livelihood	The GP failed to mention the environmental impacts to local agriculture, particularly fishing farms.
Exaggerating the Future Benefit.	<ol style="list-style-type: none"> <li>1. The GP claimed that the ENP plan would bring 3% GDP growth, while all the energy-consuming industries only consisted of 4% of the Taiwan GDP.</li> <li>2. The GP over-estimated the CO2 quota from the tree-growing efforts.</li> <li>3. The GP exaggerated the job numbers the ENP could create.</li> </ol>

Source: Quoted from one previous EIA committee member. Dr. Xu Guangrong. Apple Daily, May 11<sup>th</sup>, 2010.

In the APC review meetings in April 2010, the similar scenario repeated, for the GP delivered a perfunctory report to the APC committee. In their proposal, the

<sup>296</sup> [http://wenews.nownews.com/news/2/news\\_2996.htm](http://wenews.nownews.com/news/2/news_2996.htm)

research on the water usage, local ecological diversity, geological drilling, and soil experiments were still far from complete. The APC committee was quite disappointed with the GP's performance<sup>297</sup>, since the latter had not fulfilled its responsibility of conducting preliminary investigation before filing the report to the APC committee. While the GP always claimed they expected both the EIA and APC reviews to be "taken cared of" by June 2010, their proposals were not qualified enough to be approved by the EIA or the APC committees.

This fact indicated that the GP was not fully prepared in their EIA reports, even after a two-year period of preparation. In fact, the MOEA was partly responsible for the GP's poor performance in the review mechanisms, because the legacy of the developmental state rendered the MOEA indiscreet for the EIA reviews. Since the KMT administration and the MOEA both pledged to the GP that the EIA and APC reviews could be done before June 2010, the developer did not take these reviews systems seriously. Therefore, whenever this project encountered predicaments in the reviews, the GP rather spent time exerting pressures on the MOEA or The Executive Yuan rather than seriously complying with the requests from the EIA committee.

In the EIA review in April 2010, there were still more than three hundreds kinds of paper documents short in completing the EIA procedure, and most of the

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<sup>297</sup> See the blog of an environmental journalist, Hu Muchyng, in [http://gaea-choas.blogspot.com/2010/04/blog-post\\_22.html](http://gaea-choas.blogspot.com/2010/04/blog-post_22.html)

committee members believed that there was no way the GP could make it by the deadline through a normal review. Because the GP threatened to withdraw this project in Taiwan, the KMT administration thus took actions pressuring the EIA and the APC review by vigorously monitoring the EIA reviews. Acknowledging that the MOEA tried to escort the ENP plan without holding the GP socially responsible, the EIA committee members decided to defend for the system. In the review, they clearly stated that the Industrial Development Bureau (IDB, an agency under the MOEA) should help the GP to formulate better proposals instead of pressuring the EIA committee.<sup>298</sup>

The fact that the GP was not ready to hand in a responsible EIA proposal within two months prior to the deadline revealed the state's incapability to penetrate into the corporations. To put it differently, the MOEA was incapable of advising the developer to pass the EIA review in a non-political way. This also indicated that the MOEA's failure to rationally calculate the external costs of their petrochemical policy resulted in the developer's negligence of social responsibility. The developer, based on the previous experiences operating under a developmental state, chose mobilizing the state staffs and politicians instead of fulfilling their duty in review systems.

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<sup>298</sup> <http://e-info.org.tw/node/53836>

### **State's Weak Penetration to Local Politics**

The other reason that the GP failed to provide sound EIA proposals in time was because they constantly changed the planned sites. Frequent location changes made it more difficult to conduct research of environmental impacts on local ecosystem brought by the ENP plan. The competition for costal industrial slot with the Formosa Group in Yunlin may have been a trigger in the GP's decision to transfer the ENP plan to Zhanghua; however, the steady resistance of local counties against this huge petrochemical project was the primary cause. In fact, before Taisi (Yunlin) and Dacheng (Zhanghua), the CP attempted to initiate the ENP plan in different local counties over the last fifteen years. Most initiations were turned down by local counties, for the local counties either refused to bear the environmental costs or failed to reach consensus among local factions.<sup>299</sup> Even when the vice president, Hsiao, strongly introduced this plan to Jiayi in 1998, the local politics still step in the way. This weak penetration of the central state into local politics was primarily responsible for the fragmentation in the policy, since this uncertainty made the GP incapable of planning ahead on their investments.

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<sup>299</sup> The proposal in Jiayi County was even mediated by the current vice President, Hsiao, in 1998.

**Table 5.3 the History of the ENP plans in Different Counties**

Start Date	End Date	Sites	Reasons to Withdraw
1994	1994	Kaohsiung Taoyuan.	Massive environmental protests from the local county (DPP)
1995	2001	Jiayi	Local factional struggles
1999	2005	Pingdong	1. Resistance from the local county (DPP) 2. Collateral impacts of abolishing the Meinong Dam during the DPP administration
2003	2008	Yunlin	1. Strategic competition from the Formosa Group 2. Local factional struggles 3. Resistance from the local county
2006	2010	Zhanghua	N/A

Source: Organized by the author

From the table above, three features can be drawn from these struggles over the ENP plan. First, the CP often had the ENP planned in different sites simultaneously, which illustrated the high uncertainty in the decision-making process. The local county office, local factions, and local environmental groups all appeared as crucial players in the process.

Second, it was difficult for the ENP plan to earn cooperation in local counties governed by the DPP, mostly because the DPP politicians held a more suspicious attitude against petrochemical industry. The environmental campaigns in these counties were also more intense.

Third, while the local county government was capable of acting as



troublemakers in the policy process, the central government seemed less powerful in influencing local politics. For example, in Jiayi and Yunlin, the struggles in the local factions carried significant weight for the GP's decision-making. Particularly, the factional struggles in Yunlin from 2003-2008, described in the following paragraph, were a typical example illustrating the state's incapability to penetrate into the local level.

Before 2004, Chang Rongwei, a powerful local factional leader, governed Yunlin County. Because Chang had very close ties with the Formosa Group, he had been quite apathetic toward the ENP plan because of the rival relationship between these two petrochemical giants. While Chang promised to the Formosa Group that the land in Taisi would be reserved for the Formosa Group, Legislator Hsu Shubo, the leader of another local faction, brought new players into local politics. In 2003, via the coordination by Hsu, the CEO of CP announced that the CP would start the ENP plan in Yunlin. This competition caused a short tension between the two major local factions in Yunlin. Having said that, the two factions eventually decided to cooperate for the huge common interests in contracting businesses. During 2003-2005, the ENP plan seemed to be accepted by the Chang's local office, though the Formosa Group still boycotted it under the table.

Nonetheless, after Chang was arrested because of corruption in 2004, the KMT

lost the county head election to the DPP's Su Zhifen in 2005. The DPP's win changed the previous deal reached by local factions. As a mandate of pollution victims, Su had more doubts on the health risks brought by petrochemical industry, and was inclined to reject both the FSP and the ENP plans. As the author described in chapter three, Su tried to establish technical thresholds, carbon tax and compensation funds, to block both plans despite major local factions had previously reached agreements on introducing the ENP plan into Yunlin.

Acknowledging the fact that the ENP plan in Yunlin would not receive support from the local office and would also be impeded by the Formosa Group, the GP then decided to move the ENP to Dacheng in 2008. In fact, the GP admitted that one of the biggest reasons that the ENP moved to Dacheng was because the county office in Zhanghua appeared supportive on this project.

Through 1996-2008, the ENP plan has been staggering among different locations. During these fifteen years, the CP operating team kept contacting different local counties to seek for a possible site. While the negotiation with the local county, local factions and environmental activists may take years, the uncertainty cost was too high for the developer to bear. Therefore, the decision to build the ENP plan was held back several times during economic recessions. If one took the ENP's past in Pingdong, Jiayi, and Yunlin into account, one would find that the attitude of the local county

office has been imperative in influencing the state's petrochemical policy.

Although the central government has been aware that the establishment of the ENP may be crucial given the fact that the outdated facilities of CP were forced to retire soon, it could not co-opt the local counties to follow the direction within these fifteen years.<sup>300</sup> It may be concluded that the difficulty in receiving local support constructed major predicaments for the ENP plan. Because land acquisition, issuing construction licenses and granting approvals of preliminary constructions were all necessary preconditions for the ENP plan to be initiated, it required nothing but full support from local counties. Therefore, the relationship between developers and local counties appeared more critical than the state's policy orientation in terms of policy implementation. The rejection of the ENP plan by the Pingdong, Kaohsiung, Taoyuan, and Jiayi counties before 2008 indicated that the central government, including both the DPP and the KMT administrations, had great difficulties in penetrating local politics and in carrying out their petrochemical policies.

Even in Yunlin, where the dominating local factional leaders all reached agreements on the ENP plan, the relatively weak county head Su still managed to create troubles in driving the ENP plan away, since it would be difficult for the GP to proceed with land acquisition in Taisi without the cooperation from the local

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<sup>300</sup> The decision on stopping the polluting FCP operation before 2014 was made in 1988. During the time span from 1988 to 2010, there was very little progress on the ENP plan.

county.<sup>301</sup> Some supporters of the ENP plan in Yunlin believed that while Dacheng (Zhanghua) appeared to be a less suitable site to establish ENP in terms of its vulnerable carrying capacity of local environment, the positive attitudes from the Zhanghua county head, Zhuo, was conducive to GP's final decision in transferring to Dacheng.<sup>302</sup> In other words, local politics posed a great impact on the state's industrial policies.

In sum, the penetrative capacity into local politics of the state appeared to be a liability in the policy process. First, the state failed to take environmental consideration into their policies. After the ENP plan encountered the challenges in the EIA review, the government was not capable in guiding the developers to meet the demands of the EIA committee. Instead, the MOEA made efforts to intervene in the EIA reviews. Second, the state also failed to make reciprocal agreements with local offices after democratic transition. Most of the time the state allowed struggles between the local factions and political parties to impede state's policies. The high level of uncertainty generated from local political struggles contributed to the ineffective implementation of the state's policies.

### **Economic Rationality**

Although there were several economical concerns behind government's decision

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<sup>301</sup> China Times, May 10, 2008.

<sup>302</sup> UDN News, May 14, 2008.

in promoting the ENP plan, there were also great amount of disagreements on the economic efficiency of the ENP plan in terms of its significance to domestic economy. The economic rationality behind this plan was quite weak because there was not sufficient proof stating that this plan would bring structural changes in this sector or meet domestic demands.

### **The Balance of Power within the Petrochemical Business**

As the chapter two described, the Formosa Group and the CP Group have been the biggest petrochemical products providers in Taiwan. This duel oligarchy has existed for twenty years. As a private company, the Formosa pursued their best interests and focused on exportation when the company found the profitability in Taiwan was relatively low.<sup>303</sup> In contrast with the Formosa, the state-owned CP was obligated to act as an upstream provider to meet domestic demands. Historically, it was the CP providing more petrochemical materials to the medium-sized private petrochemical firms than the Formosa did, although the Formosa had a higher production amount after the SNP was built in Yunlin.

#### **A. the Danger of the Formosa's Monopoly**

The CP claimed that because their FNP in Kaohsiung had to be retired in 2015, it was urgent for the CP petrochemical system to build another naphtha-cracking facility.

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<sup>303</sup> While the Formosa Group decided to develop another small naphtha-cracking plant in 2003, the MOEA officials only urged that the Formosa Group share future surplus ethylene with other domestic petrochemical industries. It illustrated that the ethylene produced by the Formosa Group was not domestic market oriented. Please refer to the news: <http://www.coolloud.org.tw/node/52618>

Otherwise, the companies under the CP umbrella could face an immediate crisis because they were heavily dependent on consistent supply from CP's provision of ethylene. According to the Taiwan Institute of Economic Research, the shut down of the FNP in Kaohsiung would result in a loss of economic value of 425 billion NT dollars (equal to 13.3 billion US dollars), and about half of the petrochemical industry in Taiwan would collapse.<sup>304</sup>

The GP also claimed that the ENP plan was very essential to Taiwan's economy since the demand of ethylene in southern Taiwan exceeded 2.67 billion tons per year, and the existing facilities of CP could only provide 1.08 billion tons per year. Even with 1.2 billion tons of extra production brought by the future ENP plan, the total supply would not suffice for future domestic demands. Therefore, the establishment of the ENP was necessary in keeping the downstream petrochemical business in Taiwan, and "no other alternatives can redeem the loss originated from the FNP retirement."<sup>305</sup>

In fact, the self-sufficient rate of ethylene in Taiwan had reached ninety percent. What needed to be responsible for the shortage of ethylene after FNP's retirement was the Formosa Group's exportation policy. Therefore, the MOEA officials also believed, after the expansion of the existing SNP, the monopoly of the

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<sup>304</sup> UDN News, July 5, 2006. Also see China times, September 15<sup>th</sup>, 2010.  
[/news.chinatimes.com/politics/0%2C5244%2C11050201x132010091501197%2C00.html](http://news.chinatimes.com/politics/0%2C5244%2C11050201x132010091501197%2C00.html)

<sup>305</sup> See the "Review and Respond on the ENP plan" in the EIA reviews. April 2007.

Formosa Group in the petrochemical industry would occur, and the imbalance of power between the Formosa and the CP would cause a catastrophic outcome for national economy. The petrochemical raw materials would be controlled by the Formosa, and rubber products would escalate, since the Formosa was an interest-driven corporation.<sup>306</sup> In other words, the establishment of the ENP plan would help to break this imbalance of power and stabilize the market.

**Table 5.4 the Current Imbalance of Power between the Two Petrochemical Groups**

Current Ratio of Production (CP/The Formosa)	After SNP's expansion and retirement of the FNP in 2015
1 : 2.9	1 : 3.4

Source: Taiwan's MOEA, organized by the author

Although it was true that the Formosa would overwhelmingly surpass the CP in ethylene production after the FNP retires, it was arguable that the government needed to maintain the balance by intervention. The retirement of FNP in 2015 may pose a challenge to the CP, but it does not mean the petrochemical industry under the CP umbrella would suffer after this event. In fact, the CP could still choose to upgrade their existing facilities such as the Third Naphtha-cracking Plant (TNP) in Kaohsiung as the alternative.

The TNP was an outdated facility built by the CP in 1978. Because the production rate was limited by its outdated hardware, the upgrade of TNP was initiated in 2005

<sup>306</sup> Liberty News, August 27, 2010. <http://www.libertytimes.com.tw/2010/new/aug/27/today-life9.htm>

and was expected to be completed in 2012. The estimated production rate is expected to increase from 25 tons per year to 80 tons after the upgrade.<sup>307</sup> After the upgraded TNP starts to operate in 2013, it will ensure a consistent supply of petrochemical raw materials to downstream petrochemical firms.<sup>308</sup>

However, the MOEA still claimed that the upgrade of the TNP was not able to cover the gap between domestic supply and demand on ethylene. The MOEA made such a conclusion because they adopted a conservative model in estimating gains from the upgrade of the TNP.<sup>309</sup> However, the production rate of the new TNP can be very flexible. In fact, the production rate of ethylene by the new TNP can be up to 0.8 million tons per year based on its original design.<sup>310</sup> By this amount, the new TNP can cover the entire loss of production brought by the retirement of the FNP. (see table below)

**Table 5.5 Ethylene production in the future (unit: million tons per year)**

Two Versions	Loss from FNP retirement	Gain from TNP upgrade	Total Sum
MOEA Version	0.5	0.37	-0.13
Normal Version	0.5	0.57	+0.7

Organized by the author

<sup>307</sup> In 2008, the EIA committee originally rejected the EIA proposal of the TNP upgrade. After exerting political pressure, the TNP upgrade was soon approved by the EIA committee because of little social attention.

<sup>308</sup> China Times, December 30<sup>th</sup>, 2008. <http://news.chinatimes.com/CMoney/News/News-Page/0,4442,content+120601+122008123000390.00.html>

<sup>309</sup> The MOEA only set the production rate of the new TNP as a fixed 0.6 million tons per year.

<sup>310</sup> <http://www.cooloud.org.tw/node/42769>



Therefore, the state's promotion on the ENP plan based on the retirement of the FNP could not stand. While the MOEA often stated that the purpose of establishing the ENP was to replace the outdated FNP, the key factor behind the ENP plan was that the MOEA had an agenda in **creating a balance of power between these two petrochemical giants**. In order for the CP system to compete against the Formosa Group, the CP needed to bolster ethylene production to a much larger scale. The upgrade of the TNP can only keep the petrochemical industry under the CP system from declining. It was the ENP plan, which could guarantee the survival of the CP and its subordinate firms.

#### **B. Was the Balance of Power Intrinsically Good for Taiwan' Economy?**

If assisting pan-CP firms was to break the one-company dominance through the establishment of the ENP, there were two levels of questions involving in this proposition. **First, was the dominance of the Formosa group in Taiwan's petrochemical industry detrimental to Taiwan and this industry? Second, if the answer to the first question is positive, was supporting the CP the most efficient method to break this dominance?**

The MOEA's answer was definitely "yes" for both questions. In September 2010, the MOEA director, Yen, made an announcement stating that "the purpose of building the ENP is to avoid Formosa's monopoly," and listed oil prices as an

example. According to Yen, during 2007-2008, the skyrocketing oil price hindered Taiwan's economy. The Taiwan government once asked the oil providers, both the Formosa and the CP, to freeze domestic gas prices in order to stabilize the economy. While the CP complied with the government and suffered a loss of ten billion NTD, the Formosa Group decided to export most of their petroleum products overseas to avoid the business without profits.<sup>311</sup> Yen thus concluded that it was dangerous allowing an interests-driven private firm to dominate the market, especially for such strategically important goods. Yen also implied that the price of livelihood goods may escalate once the Formosa Group takes over the market in the future.

In fact, Yen's argument was quite misleading. In terms of the question in the first level, even though the competition between these two corporations can be maintained by the state's robust calculation, the price of ethylene would be unjust. **It is a controlled subsidy rather than a free market mechanism.** The price of ethylene produced by the CP has been constantly lower than those produced by the Formosa Group and imported items<sup>312</sup>. However, the cost of operating naphtha-cracking facilities of CP was actually higher given their smaller scale, more outdated facilities, and higher personnel costs. With those disadvantages in CP, it was a very surprising fact that the CP still manages to supply the market with a lower price in this long

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<sup>311</sup> IDB website.

<http://www.moeaidb.gov.tw/external/ctrl?PRO=filepath.DownloadFile&f=policy&t=f&id=1377>

<sup>312</sup> <http://www.cooloud.org.tw/node/43201>

period. In fact, this may suggest that the CP has played a role in stabilizing the ethylene price without considering the market mechanism.

In 2008, the petrochemical branch of the CP suffered a loss up to thirty million USD, because they failed to reflect their costs to downstream petrochemical firms.<sup>313</sup>

It was actually the taxpayers bearing the cost since the CP was a SOE, and **this twisted price mechanism caused the distortion of external costs of developing petrochemical industry in Taiwan.** In this sense, the CP was a “state tool,” for it served a bigger goal in implementing government’s economic policies. Therefore, although the existence of CP in the petrochemical market may help to lower the price of ethylene, it actually caused more inefficiency in the market.

**Table 5.6 the Price Difference between CP, Formosa and Imported Items (ethylene/per ton)**

	Compared to Formosa	Compared to imported item
CP’s Ethylene price	20 US dollars lower	100-150 US dollars lower

Source: <http://www.cooloud.org.tw/node/43201> , 2009

Despite the fact that a distorted market may not be the desirable goal for Taiwan’s economy, even when one agrees on that the monopoly of ethylene by a malicious corporation, if any, could be theoretically dreadful to national economy, the second level of question is still valid. **Should the Taiwan state support the ENP plan to break this dominance?** Did the fears against Formosa’s dominance over

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<sup>313</sup> Apple Daily, July 12, 2008.

petrochemical market automatically lead to a conclusion in giving birth of the ENP plan by the GP? The answer remains unclear.

The first problem of Yen's notion on this "duopoly" was it might not be more competitive than monopoly. Historically speaking, the competition between the Formosa and CP in the gas market was quite evident in proving this point. Taiwan's petroleum market had been once totally monopolized by the CP, and the Formosa Group was permitted to enter this market in 2000. Although the Formosa group claimed that the competition in the gas market would help to reduce the gas price, facts suggested the opposite. In fact, the CP and the Formosa entered a "joint-pricing" mechanism on a tacit pact, and the competition did not really occur. The Formosa has been exporting their oil products, including gas, to digest their overstock. Therefore, the price of gas remained fixed after the Formosa entered this market.

Second, it is very difficult to artificially maintain the balance of power. Before 1999, the CP was the sole domestic provider of ethylene, and the Formosa Group was in a much weaker position while entering the market. However, a decade after 1989, the Taiwanese government had to nurture the CP to keep this SOE in the game. The CP was far behind because of its higher operational costs and slower progress in formulating new market strategies. This fact suggested that the market may change rapidly, and the productive capacity was also highly associated with the companies'

strategy selection, operational costs, and their missions. Also, while the CP planned to initiate the ENP plan to be back into the game, the Formosa begun to expand their SNP at the same time as well. The result of competition is quite dynamic, and it may be very difficult for the government to ensure the outcome of the competition, let alone to remain a balance of power, since the government may have difficulty in anticipating “how much is enough”.

Therefore, the goal for the MOEA was not to maintain the balance of power in the petrochemical industry per se, but rather to guarantee a consistent supply of low-cost petrochemical materials in Taiwan, which **may be an inefficient policy given its negligence on external costs and its competitiveness on global market.**

The rapid growth of the Formosa, a private company that may be more difficult to be restrained by the MOEA, jeopardized the state’s plan in providing petrochemical materials at a fixed low price, since this private provider refused to undersell raw materials to domestic petrochemical firms.

In addition, if the dominance of the Formosa Group continues, this firm will eventually build relationship with most of the downstream petrochemical manufactures in Taiwan. If the Formosa Group decides to migrate to China one day, it would create a crisis because its growing downstream partners may have to side with the Formosa during the migration. Therefore, the Taiwan state was trying to intervene

for the market by developing a Taiwan-friendly petrochemical entity, which could faithfully implement the state's policy. More precisely, it was not the **competition** that the Taiwan government wanted to create, but a "loyal policy practitioner" to support petrochemical sector in Taiwan.

### **The ECFA and the Competition with China**

According to the MOEA's plan, with the ENP plan, Taiwan's goal in 2015 is to become the operation center in Eastern Asia.<sup>314</sup> Under this goal, the most competitive opponent would be China. With new facilities accomplished in 2012, China may have a leaping development in the ethylene industry with a total production of 9.5 million tons per year. Most important of all, these facilities will be controlled by three big Chinese SOEs. Because the Taiwan government felt reluctant to let the Chinese petrochemical firms control the supply of ethylene, a Taiwan-operated ENP plan would be necessary in building a self-sufficient supply chain.<sup>315</sup>

Therefore, the other purpose for the Taiwan state to push the ENP was to maintain Taiwan's current advantage in the petrochemical business, both in the Taiwanese and Chinese markets. Not only the ENP could bolster petrochemical productions in Taiwan, but the ENP also stood for the government's effort to hold capital of petrochemical firms in Taiwan before they move to China. However, did

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<sup>314</sup> Please refer to the IDB's "*the Development Strategy of Taiwan's Petrochemical Industry*" in the EIA review meetings. April 2007.

<sup>315</sup> Central News Agency, December 14<sup>th</sup>, 2009.  
<http://news.cts.com.tw/cna/money/200912/200912140364148.html>

this policy really create better economic efficiency? There were some facts suggesting that this policy was rather a political decision than an economic one driven by reasonable economic efficiency, since the economic benefits from enlarging petrochemical sector was not evident.

#### **A. Oversupply of Petrochemical Products in China**

According to the estimation from *Oil and Gas Magazine*, China will become the biggest producer of ethylene in 2015, and the total production of Chinese petrochemical production will be equal to the combination of Taiwan, Japan and Korea.<sup>316</sup> With the rapid development of the petrochemical industry in this decade, the Chinese petrochemical industry has grown vigorously. Another study from IEK (Industrial Economics and Knowledge, a research institute under Taiwan's MOEA) also suggested that the overall supply of ethylene by Chinese petrochemical providers had been exceeding the total demand in the Chinese market after 2008. In addition, the gap between supply and demand will continue to increase until 2012.<sup>317</sup> Given the fact that China does not need to import crude oil from outside, China is able to develop this sector with cheaper costs and reliable sources. It also means that it would be very difficult for Taiwan's petrochemical firms to compete with their Chinese

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<http://www.ogj.com/index/article-display/2155965095/articles/oil-gas-journal/volume-108/issue-9/Technology/OGJ-FOCUS-Competitive-pressures-changing-Asian-petchems.html>

<sup>317</sup> IEK, 2010/04.

[http://www.ibuyplastic.com/tech\\_center/tech\\_paper/tech\\_detailcontent.phtml?id=609&IBP\\_SID=4efea527fc90687244972c0e4acaa6e9](http://www.ibuyplastic.com/tech_center/tech_paper/tech_detailcontent.phtml?id=609&IBP_SID=4efea527fc90687244972c0e4acaa6e9)

counterpart. Not to mention the transportation costs of the products shipped from Taiwan to China would make Taiwan's petrochemical products more uncompetitive.

In fact, China has appeared as the biggest market for petrochemical products from Taiwan. About 70% of the petrochemicals produced in Taiwan were exported to China. While China became the major market for Taiwan's petrochemical products, the oversupply of petrochemical products in both the Taiwanese and Chinese markets would soon become a potentially precarious situation to Taiwan's petrochemical firms. In other words, in the near future, establishing a grand-scale ENP in Taiwan would be a very arguable decision.

In the meantime, the global ethylene market also reached its limit. The analysts from Chemical Market Associates Inc. (CMAI) stated that the recent rapid boom from the Asia and Middle East petrochemical industry has push overproduction to a new stage. "It's going to take a number of years for this overhang in 2010 to be absorbed."<sup>318</sup> Given the upcoming surplus of supply in global and Chinese markets on ethylene, the profitability of the ENP plan would be uncertain.

Besides, the "ASEAN+3" system has exerted another wave of pressures on Taiwan's petrochemical community. The new production brought by the ENP plan would become less competitive if Taiwan fails to reach an agreement with China on

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<sup>318</sup> The report was delivered in World Petrochemical Conference. April 1<sup>st</sup>, 2010. See <http://www.plasticstoday.com/articles/right-sizing-realignment-underway-global-petrochemical-industry>



reducing tariffs on exported products. Therefore, certain economical arrangements between Taiwan and China must be created in order for Taiwan's petrochemical industry to increase productivity. The ECFA agreement appeared to be an opportunity to protect Taiwan's petrochemical sector, but unfortunately, the Taiwan government failed to build this cushion in the negotiations in 2010.

### **B. ECFA as the Solution? No!**

According to the research from the Chinese Economic Research Institute in 2009, the reduction of tariffs on Taiwan's petrochemical products from 6.7% to zero, through signing the ECFA treaty with China, would bring 38 billion USD in revenue to Taiwan's petrochemical products.<sup>319</sup> In other words, while the petrochemical industry in Taiwan believed that they had reached a dead end, the ECFA may give them a chance to offset the disadvantage if tariff reduction could be realized, though some petrochemical entrepreneurs believed the gain might be marginal.<sup>320</sup> If Taiwan's petrochemical products acquire tariff-free status in China, in terms of the production costs, "there would be little difference between investing in Taiwan and China then."<sup>321</sup> Therefore, to put Taiwan's petrochemical industry on the tariff-free list had been the top priority in ECFA negotiation for Taiwan side.

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<sup>319</sup> Business Weekly, Vol 1138, September 14, 2009.

<sup>320</sup> Some Taiwan's petrochemical entrepreneurs believed that ECFA would not enlarge the market share of petrochemical products like the MOEA claimed. The petrochemical industry estimated that the ECFA could "only prevents the market share from dropping

<sup>321</sup> This was from the interview with the owner of the Formosa Group. *Tianxia Magazine*, vol 437. January 2010. <http://www.cw.com.tw/article/index.jsp?page=1&id=39997>

If Taiwanese government was not capable of putting petrochemical industry into the “Early Harvest List” in the cross-strait negotiation, the ENP plan could be a harmful decision. Petrochemical industry in Taiwan will had to face the challenges from growing Chinese domestic petrochemical competitors and a series of critical competition form ASEAN countries in Chinese market then. Therefore, the petrochemical industry in Taiwan strongly asked the Taiwan government to protect their interests in the ECFA treaty, for it was the last incentive for them in investing in Taiwan.

Given the small scale of domestic market of petrochemical products, “overproduction” has been a constant risk for Taiwan’s petrochemical firms. While the gap between domestic supply and demand of ethylene in Taiwan was 0.6 million tons per year, the size of the ENP was expected to produce 1.2 million of ethylene. This huge production will inevitably trigger overproduction problem once it starts operation. In fact, the MOEA’s publication in 2009 has clearly stated that both the SNP and the ENP’s production will target industrial zones in China to digest their oversized production.<sup>322</sup> Therefore, the operation of the ENP will inevitably face the overproduction issue in the Chinese and global market.

However, Taiwan’s petrochemical products could, to be the better part, remain

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<sup>322</sup> IEK, *2009-2010 Petrochemical Annual Book*.

status quo only when the ECFA granted tariff-free status to Taiwan's petrochemical status. If the Taiwanese government failed to put petrochemical sector on the ECFA's early harvest list, current overproduction of petrochemical products would erode the profitability of this sector, not to mention after adding great amount of production from the ENP plan in the future. In other words, it may be a very shaky sector for the government to invest on.

The Chinese domestic petrochemical corporations such as Sinopec and CNPC also acknowledged that an upcoming harsh competition in Chinese market would occur due to the overproduction across the strait. During the cross-strait negotiations, these companies kept lobbying the Chinese government to shut the door to the Taiwan petrochemical industry. In May 2010, the Chinese government finally ruled that, in the upcoming ECFA treaty, about 90% of major petrochemical products from Taiwan would still carry a 6.5% tariff if exported to China (and ASEAN).<sup>323</sup> Owing to the requests of the Chinese domestic petrochemical industry, the Chinese government refused to benefit the competitors from Taiwan.

To China, this decision was also a strategic move in the cross-strait competition. Instead of allowing Taiwan's petrochemical industry to stay in Taiwan and enjoy the zero-tariff benefit, the tariff in an "ASEAN+3" system would create huge pressure for

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<sup>323</sup> China Times, May 26, 2010.  
<http://news.chinatimes.com/mainland/0,5245,50503758x112010052600208,00.html>

Taiwan's petrochemical firms. Once Taiwan's petrochemical firms decide to migrate to China under this pressure, given their mandatory joint-venture character with Chinese domestic firms, Chinese government would be able to take full control of this industry across the strait. Instead of staying as a part of the production chain, the petrochemical sector in China could take a more dominant position.

However, the MOEA's promotions on the ENP plan still carry on even though Taiwanese government failed to put the petrochemical sector on the list. While the petrochemical products in Taiwan will not receive tariff-free status in the future, the ENP plan was a great risk on future overproduction. This suggested that economic rationality behind the ENP plan has been surrendered to political concerns.

### **C. Supply Creates Demand?**

The salience of the ENP plan was the productivity of ethylene, which has been the key of industrial chains. Therefore, the MOEA defined it as a national strategy to be self-sufficient on ethylene. In the "*EIA Reports on Petrochemical Policy*" in 2010, the MOEA claimed that the goal of Taiwan's petrochemical policy was to be "fully self-sufficient for domestic needs on ethylene." However, even though the MOEA officials believed that the ENP plan may help to reach the goal in being self-sufficient on ethylene, there was no agreement among economists whether Taiwan needed another naphtha-cracking facility.

According to Taiwan's *Business Week Magazine*, before the SNP was built in 1998, the self-sufficiency rate of ethylene in Taiwan was only thirty-eight percent and thus it might be reasonable to develop this upstream facility as ethylene was an upstream element in the petrochemical industry. However, after the upgrade of the SNP in 2003, Taiwan's self-sufficiency rate of ethylene has increased and eventually exceeded ninety percent in 2008. With such a high self-sufficiency rate of ethylene, there was no urgent need for Taiwan to develop a huge project to meet this ten percent gap.

Besides, there was also a hidden problem in this "self-sufficiency myth." Because ethylene was a byproduct of the oil refinery industry, the production of ethylene was closely associated with the production of crude oil. While more than 99% of Taiwan's petroleum has depended upon importation from abroad, the self-efficiency rate of ethylene was a myth, since Taiwan could by no means self-sufficient on oil. In this case, it was the oil, instead of ethylene, that matters for being self-sufficient.

Most important of all, a more crucial problem on the ENP plan was the attitude of Taiwan's petrochemical firms. Owing to the character of the petrochemical industry, the establishment of the upstream naphtha-cracking facilities was mostly driven by the downstream demands. It was the so-called "reverse integration." In Taiwan, it was the demand from small downstream petrochemical firms, which triggered the

establishment of Taiwan's first naphtha-cracking facility in 1968. During 1973-1984, it was the thriving demand of ethylene in Taiwan that triggered the Taiwan state to develop the upstream petrochemical industry as the "target industry" and built three naphtha-cracking facilities.<sup>324</sup> In other words, it was the existing demands, which brought upstream facilities, not vice versa. There has been a very similar scenario occurring in China recently.

However, in the last two decades, there were sixty percent of Taiwan's downstream petrochemical firms migrated to China. Owing to the character of "reverse integration" in this sector, those firms were actually seeking local upstream naphtha-cracking facilities in China to cooperate with. Therefore, if there was a choice, those firms would prefer to build their naphtha-cracking sources in China. In fact, during the 1990's, some private petrochemical firms in Taiwan had attempted to set up the naphtha-cracking facilities in China. Based on the comparative advantage, they appeared relatively apathetic in conducting investment in Taiwan.

The impetus driving this group migration was that it has been increasingly difficult to evade environmental regulations and to acquire cheap lands in Taiwan for petrochemical sector.<sup>325</sup> Far from 1995, the CP has already sought for a possible site

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<sup>324</sup> Chu, Wan-Wen Chu. 2001, "Taiwan's Petrochemical Industry After Liberalization And Globalization,"(自由化與全球化之後的台灣石化業), *Taiwan: A Radical Quarterly in Social Studies*(台灣社會研究季刊), Vol 44, pp13-47

<sup>325</sup> Commercial Times, September 6, 1998.

for the ENP plan in Taiwan. However, the highly polluting feature prevented the CP from finding a local county office willing to accept this plan because of its extremely high external costs. With the massive environmental campaigns against large-scale petrochemical facilities, the ENP plan, along with other petrochemical projects found itself unwelcome in most places. In the meantime, the cost of acquiring suitable sites for industrial use also drastically increased in Taiwan after a certain level of economic growth. Those factors also decreased the willingness of the petrochemical entrepreneurs to invest in Taiwan.

During 1995-2002, the CP encountered a small series of privatization. The ENP plan looked like an appealing target to draw investors' attention while their disadvantage against the Formosa Group in petrochemical sector would make the CP a liability in the stock market.<sup>326</sup> Therefore, the CP decided to build joint venture with Taiwan's private firms in starting the ENP plan, but agreements could not be made among the coalition, for most private firms did not find it profitable to launch the ENP plan in Taiwan.<sup>327</sup> At that time, most Taiwan private firms had little interest in joining the ENP plan. It was the fact that their facilities in Taiwan were highly dependent on the CP's supply of ethylene, which pushed them to join this coalition. In 2002, the CP had to start this plan without the participation of other private firms.<sup>328</sup>

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<sup>326</sup> Epoch Times, October 15, 2002. <http://www.epochtimes.com/b5/2/10/15/n235665p.htm>

<sup>327</sup> Epoch times, April 25, 2003.

<sup>328</sup> Epoch times, October 15, 2002. <http://epochtimes.com/b5/2/10/15/n235665.htm>

The choice of private firms revealed the fact that marginal utility of the ENP plan was open to question.

When the financial crisis occurred in 2008, this petrochemical industry in Taiwan was immediately hit. With problems digesting their massive production, the issue of “Move to China” was brought up again since the market in China was the only place remaining growing during this global recession. While China has become the primary market for Taiwan’s petrochemical products, most of the petrochemical firms believed it was crucial for Taiwanese firms to “occupy the seats” in order to win the future competition over Chinese market. In terms of competitiveness, it would be inefficient to keep the upstream facilities in Taiwan while letting go of the downstream ones. The fragmented supply system may actually result in the increase of production costs.<sup>329</sup>

While major petrochemical entrepreneurs blamed the government for suffocating the petrochemical industry in Taiwan, the MOEA expressed their priority in this decision. In 2009, the MOEA claimed that **the profitability of certain sectors “was not the primary concern” of the Taiwanese government.** Rather, the reason that the Taiwan government banned the investment of upstream petrochemical facilities in China was because lifting this ban would cause three negative influences. First, it

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<sup>329</sup> See the statement from the CEO of the Formosa Group. Apply Daily, February 13, 2007.



would result in capital outflow. Second, it would affect domestic confidence to invest. Third, it would trigger a collective migration to China including more downstream firms and massive unemployment<sup>330</sup>. **This statement clearly showed that the decision to start the ENP was not based on a market-driven concern.** Instead, political concerns such as reducing the unemployment rate dominated the decision-making agenda.

In October 2010, Du, the director of Taiwan's IDB, also stated that: First, in order to maintain Taiwan's economic growth, the petrochemical industry has to exist in Taiwan. Second, in order for the petrochemical industry to stay in Taiwan, the government has to "exploit investment in upstream facilities to push forward growth for other sectors." Otherwise, Taiwan's petrochemical industry will entirely migrate to China, and this capital outflow would increase the unemployment rate in Taiwan.<sup>331</sup> Du also announced that *the top priority in formulating ENP plan was to "Leave Industry's Roots in Taiwan."*<sup>332</sup> By "root", Du was referring to capital and jobs. To put Du's words differently, the government would create the productivity without concerning market demands, and they believed that the demand may be created later overstock problem occurs.

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<sup>330</sup> Economic Daily, December 17, 2009.

<sup>331</sup> See the PTS TV Program, "Our Island," Vol 578, October 11, 2010. <http://web.pts.org.tw/php/html/island/list.php?pbeno=1549>

<sup>332</sup> This speech was given when Du attended a seminar held by Taiwan's Plastic Industry Development Center on October 13, 2010. See Commercial Times, October 13 2010.

Du's notion clearly violated the "reverse integration" pattern of the petrochemical industry. This twisted mindset on economic growth by political concerns imposed a negative influence on market rationality of private firms. During 2008-2009, both GP and the Formosa Group delivered naphtha-cracking plans in Taiwan (the ENP for the GP, and the expansion of the SNP for the Formosa Group). However, in the meantime, they both asked the government to lift the ban on the investment of naphtha-cracking facilities in China. It suggested that both plans were not made based on the concerns for profitability, but in trade of an open window to China.

In fact, even the shareholders in GP were highly pessimistic about the future ENP plan. Rather than worrying that the EIA review would terminate the possibilities of starting the ENP plan in Taiwan, they actually believed it was neither profitable nor efficient, given the clear disadvantage in the skyrocketing costs in operating the ENP plan in Taiwan. They wanted the EIA committee to approve this plan, because, like the LCD industry, the ENP was the "safe deposit" they had to pay before the migration. Even when the EIA approved the ENP plan, most shareholders would rather not start it.<sup>333</sup>

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<sup>333</sup> The chairperson of Petrochemical Union asserted that the ENP was officially dead, since most stakeholders would like to withdraw their capital. Their primary concern was whether the government would lift the ban if the ENP plan failed to pass the EIA review. See Liberty Times, November 27<sup>th</sup>, 2010. <http://www.libertytimes.com.tw/2010/new/nov/27/today-e1.htm>

### **Economical or Political?**

The threshold in impeding capital's outflow to China was not a single event. Starting from 1988, while the Formosa Group was banned from implementing the Haicang Plan in China, the Taiwan government was very reluctant in approving large-scale investment conducted in China. From 1992-2000, the KMT implemented a "No Rush, Stay Patient" policy to boycott fast capital inflow into China caused by a great difference of wages across the strait. In order to redirect the capital, the Taiwan state even launched several projects encouraging Taiwan's firms to invest in Southeast Asia and Central America during 1996-2000.

During 2000-2008, the cross-Strait was frozen due to the DPP's pro-independence position. The DPP administration had a stricter policy in limiting capital flowing to China. The most significant case was the investment plan brought by Formosa Group. In 2003, the Formosa Group planned to invest on new petrochemical facilities in China, and the DPP administration adopted "technical measures" to delay the review.<sup>334</sup> President Chen even publicly asked Taiwanese businessmen to be "patriotic" and loyal to Taiwan in 2006 in regard to conducting investment in China.<sup>335</sup>

The capital inflow to China was considered a national security issue when

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<sup>334</sup> <http://big5.huaxia.com/20030917/00121833.html>

<sup>335</sup> Commercial Times, Editorial, February 8th, 2006.

<http://news.chinatimes.com/Chinatimes/newslit/newslit-content/0,3546,120514+122006020800533,00.html>

“China is too important economically for Taiwan to resist politically”. National security thus became a major concern in these industrial policies, while the Taiwan government was also anxious about losing capital and jobs triggered by the migration to China. Therefore, the ENP plan became necessary under the principle of “Leave Roots in Taiwan.” Only when the ENP plan was realized in Taiwan will it be more politically correct to lift the ban.

Therefore, a reasonable sense of economic rationality was missing in the policy-making of the ENP plan, regarding industrial policy. The state seemed to place more attention on facilitating the GDP rate, rather than truly developing the petrochemical business in meeting future market changes. For those bureaucrats, keeping investments in Taiwan appeared to be a much more important concern.

### **Deliberation**

During the policy formulation, one of the major problem was that the MOEA failed to conduct a comprehensive review on the energy and water issues. The MOEA often made arbitrary decisions to accommodate with the ENP plan without including the voices of local residents and civil groups. However, the huge negative impacts brought the ENP plan led to the jam in the EIA procedures and created more room for possible deliberation, since there was hardly any agreement on the cost effectiveness of the ENP plan among the petrochemical industry and local neighborhood. The

conflicts in EIA procedure aroused widespread attention from different government agencies. Both the Legislative Yuan and the EPA asked the MOEA to adopt a more deliberative policy-making procedure before submitting this hot potato to the EPA. In other words, this series of conflict set a good model for deliberative policy making, though may not perfect, for policy formulation in the future. Although the deliberation in the MOEA policy system was rather symbolic, it was the first time that the economic bureaucracy had to listen to the voices from local neighborhood.

### **Inconsistent Deliberation on Energy Efficiency and CO2 Emission**

The first critical issue brought by the ENP dispute was the energy use. Taiwan is a country with scarce natural resources, and the development of energy-intensive industry specially requires discretion. According to the data from Taiwan's Energy Bureau, the energy-intensive industry such as the petrochemical industry has possessed a disproportionate ratio of energy consumption. Based on the data, from 1988-2008, these industries consumed more than 30% of total energy, but only produced 4% or lower of the GDP. In 2008, the energy-intensive industries consumed 36.5% of the total energy, but only contributed 3.86% of the GDP. Furthermore, with the rapid increase of energy prices, the cost of importing energy overseas also increased. In 2008, the importation of energy cost Taiwan 15.3% of the total GDP, which also suggested that Taiwan had to spend 5.5% of the total GDP to feed these

energy-intensive industries, while only receiving 3.86% of the GDP in return.<sup>336</sup> In this case, investment on the energy-intensive ENP plan may be seen as an inefficiency of energy in terms of cost effectiveness, since the opportunity cost exceeded the possible benefit.

**Table 5.7 the relationship between energy import and GDP produced in Taiwan**

Year	Total Energy Import Consisted of GDP Ratio (%)	Total Energy Consumption Ratio by Energy Intensive Industries (%)	Total GDP Produced by Energy-Intensive Industries (%)
1988	2.81	32.0	4.28
1990	3.81	28.1	3.90
1995	2.58	27.9	3.85 (3.66)*
2000	3.88 (3.94)*	27.3	4.02 (3.72)*
2005	7.94 (8.14)*	32.3	4.15 (3.15)*
2008	<b>15.3 (15.8)*</b>	35.9	<b>3.86 (2.90)*</b>
2009	<b>10.02</b>	36.3	- NA

Source: 2009 Energy Statistic Pamphlet published by the Energy Bureau in Taiwan. (Organized by the Taiwan Environmental Protection Union.) \* indicated the estimation from environmental groups.

In addition, according to the International Energy Agency (IEA), in 2007, Taiwan was listed eighteenth place in terms of total amount of CO<sub>2</sub> emission, and had the top growth rate in CO<sub>2</sub> emissions on average.<sup>337</sup> The total amount of CO<sub>2</sub> emission from Taiwan was approximately 257 million tons per year. The EPA director also proved that the average CO<sub>2</sub> per capita in Taiwan was 12.08 tons, which was

<sup>336</sup> See the 2009 Energy Statistic Pamphlet published by the Energy Bureau in Taiwan.

<sup>337</sup> Based on IEA data and presented by Liu Shao-chen in SINICA.  
<http://www.epochtimes.com/b5/7/4/25/n1690344.htm>

2.76 times above global average.<sup>338</sup>

As one of the top emitters of CO<sub>2</sub>, Taiwan would inevitably face the challenge of Kyoto Protocol in the near future. By paper, the Taiwanese government had a plan to reduce 87 million tons of emission by 2020.<sup>339</sup> However, the ENP plan was expected to increase at least 12 millions tons of CO<sub>2</sub> emission after it started operation<sup>340</sup>, and this number may be an underestimation.<sup>341</sup>

Besides, with the proposal of the *Reduction of the Greenhouse Gas Act (GGRA)*, in order for the ENP plan to receive the emission rights, the GP has to buy them from overseas sources if the carbon regime starts becoming effective. According to the estimation of Taiwanese environmental groups, the minimum annual CO<sub>2</sub> emission brought by the ENP plan would be somewhere between 47 million tons and 67 million tons, dependent on the fuel sources the ENP will use. It will cost the GP 2.35 billion USD yearly to purchase these permits.<sup>342</sup> It would make the ENP plan much less profitable if one adds the cost of CO<sub>2</sub> emission into the evaluation on cost effectiveness. If the MOEA decided to follow a “fully self-sufficient” policy for the

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<sup>338</sup> The director of the EPA, Shen, proposed the data. See EPA website:

[http://ivy5.epa.gov.tw/enews/fact\\_Newsdetail.asp?inputtime=0990418193441](http://ivy5.epa.gov.tw/enews/fact_Newsdetail.asp?inputtime=0990418193441)

<sup>339</sup> [http://www.in-en.com/article/html/energy\\_0911091196557163.html](http://www.in-en.com/article/html/energy_0911091196557163.html)

<sup>340</sup> Like the FSP, the ENP will contribute a big burden in this carbon-reducing plan, because the CO<sub>2</sub> emission brought by the ENP plan was estimated to reach 8 to 16 million tons per year, depending on the scale of the following expansion.

<sup>341</sup> According to environmental scholars, this number was not incredible since the average CO<sub>2</sub> emission of the SNP is 67.55 million tons. While the size of the ENP was approximate to that of the SNP, a more reasonable estimation was 36 millions tons, at least, if the ENP adopts the best available technology. <http://e-info.org.tw/node/57959>

<sup>342</sup> This estimation is based on the market price of 50 US dollars per ton of CO<sub>2</sub> emission. Taiwan Environmental Protection Union did this calculation. Please refer to: <http://www.tepu.org.tw/?p=2045>

petrochemical industry, the expanded SNP combined with the ENP would consist of more than one-third of Taiwan's total CO<sub>2</sub> emission in the future. Therefore, the CO<sub>2</sub> emission problem was an issue, which needed to be treated seriously.

However, instead of searching for solutions, the MOEA bureaucrats claimed that since Taiwan was not a signature entity of the Kyoto Protocol, given its ambiguous status of national identity, this international treaty did not bind Taiwan. During 2005-2006, despite acknowledging the huge amounts of CO<sub>2</sub> emission brought by the FSP and the ENP, the MOEA officials claimed they would definitely support this project by all means. This action illustrated Taiwan's negligence on possible risks brought by its petrochemical policy.

During 2005-2007, even with the anti-nuclear activist Chang Goulong as the EPA director, who expressed his suspicion about the ENP plan in a weekly meeting within The Executive Yuan, the MOEA staff chose to ignore Chang's opinion. While Chang insisted that both the FSP and ENP had to be reviewed under a "policy EIA" scope, which suggested the EIA committee, should **shift the review focuses from a single project to the industrial policy as a whole. After five years, this policy EIA was eventually realized in December 2010.**

In the early stage, in order to reconcile the conflicts between the MOEA and the EPA, Premier Hsieh finally chose to assign this decision-making task to the



“Sustainable Developmental Council, SDC”, a platform-based agency led by an environmental law scholar, Yeh. In the regular meetings in the Executive Yuan, the Premier Hsieh allowed this agent, instead of the MOEA in previous administrations, to take charge of the comprehensive reviews of this policy. In 2005, the Premier Hsieh echoed the conclusion from the SDC and decided that the CO<sub>2</sub> emission and water scarcity should be both listed as the primary concerns of this policy.<sup>343</sup> Throughout his term, the ENP plan was held back because of this strong deliberative function from the SDC.<sup>344</sup>

During Premier Hsieh’s term from 2004-2006, he took a more deliberative position on this petrochemical policy. He froze the government’s budget in promoting the ENP plan and claimed that the ENP would not be finalized until the impacts of possible emission of greenhouse gas could be dealt properly. Also, the EPA under Hsieh’s period adopted a strong position on legislating the *GGRA* and tried to integrate more perspectives about the state’s petrochemical policies.

After Chang and Hsieh both resigned in 2007 and 2006, the deliberation within the state on the ENP plan was declining. The successors of the EPA and SDC had been more inactive on this project<sup>345</sup>, and the SDC was also even abandoned after

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<sup>343</sup> See the record of twentieth meeting of the SDC on July 8, 2005.

<sup>344</sup> From 2005 to 2010, Premier Hsieh was an anomaly among all the administrations. Most of the administrations, including Su (2007-2008), Liu (2008-2009) and Wu (2009-now), all framed the ENP plan as a national-level project that the state must make every effort to complete.

<sup>345</sup> For example, while the legislators criticized that the future FSP and ENP combined would consist of 66 % of current CO<sub>2</sub> emission in Taiwan, the EPA director, Shen, even claimed that the high volume

2008 since it was only a policy platform. After Chang's hard works in pushing the draft of the GGRA into the Legislative Yuan in 2006, there was very little attention on this act in the Legislative Yuan during 2006-2010. There were only two articles passing the legislative review, while the rest of the articles still haven't been meaningfully discussed. This hollow commitment on greenhouse gas reduction also illustrated the government's inconsistency on energy issue.

### **Lack of Equity and Deliberation on Water Supply**

Another problem brought by the ENP plan was the water shortage in central Taiwan. For the ENP plan, no matter if it was built in Taisi (Yunlin) or Dacheng (Zhanghua), it would encounter the problem of water shortage since it required 0.4 million tons of water per day after 2017. In this regard, the ENP plan appeared to be an environmentally disastrous project considering its external cost. Similar with the CTSP, the destiny of the ENP plan highly relied on a series of water-collecting engineering projects in the future, which also challenged the planning of water management.

Due to severe water scarcity in central Taiwan, the external costs to conduct the ENP plan in this area were extremely high. Both the Erlin and ENP plans in

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of CO2 emissions brought by the ENP plan was not an urgent issue, since petrochemical firms can grow trees oversea to receive credits. Shen obviously neglected the fact that, as the director of the EPA, he was expected to protect Taiwan's environment. The quota earned by growing trees overseas was a feasible strategy of industrial sectors, but definitely not an appropriate solution proposed by the EPA director, since the goal of the EPA was to reduce the total emission.

Zhanghua were expected to consume 0.6 million tons of water per day in the future, while the total household consumption of water in Zhanghua was only 0.36 million tons. The water supply for both projects combined clearly exceeded the water carrying capacity in this area.

In order to implement both plans, the Water Bureau planned to build a tier in Dadu River and to transport 0.8 million tons of water per day to both Yunlin and Zhanghua. The pipeline construction would cost another 30 billion NT dollars, and was designed to serve the sole interests of these industrial projects. Although the Water Agency claimed that they will collect usage fees from the users after the Dadu tier started to function, the cheap water price still appeared as an issue of injustice.

**Table 5.8 the Injustice of Water Distribution**

<b>Plans</b>	<b>Price of Water (per NTD for per unit)</b>
<b>ENP plan</b>	<b>8</b>
<b>SNP Plan</b>	<b>4</b>
<b>Household Use</b>	<b>13</b>

Source: Water Agency

The justice problem was not only that the corporations were allowed to consume more inexpensive water than the civilians did, but the corporations also got the priority to be provided water before households. While Water Bureau made those decisions without the participation of civil groups and agricultural groups, the distributional and procedural justice in this water governance were therefore

questioned in the EIA review process.

First, the Zhanghua-Yunlin areas have encountered water scarcity issue for decades. Among the 0.36 million tons of daily water usage per day in Zhanghua county, 0.3 million tons of them were extracted from under-ground water. Therefore, land subsidence had been a serious problem in local area and was jeopardizing the safety of high-speed rail passing through this area. In Zhanghua, local authorities and experts had to establish restricted areas to prohibit local people from setting up extracting wells. Therefore, water was a huge issue in this area, and providing household-use water for local residents was presumably equally important. However, the water authority directly handed the new water from Dadu tier to the ENP plan without discussing this with local residents. The plan of the Dadu tier was built to provide water solely for industrial usage, and the government did not plan to build water-cleaning facilities along with this project, which means the water rights of local residents were neglected.

Second, although the MOEA claimed that the water quality of Dadu River may not be suitable for drinking, the water extracted from Dadu River can still be used for agricultural irrigation. As a matter of facts, the land subsidence was also caused by a shortage of irrigational water, since farmers often drill for underground water while having difficulty finding water from the irrigational channels in summer. Therefore,

the agricultural sector was presumably entitled to have a share in this “water pie.” However, farmers, like other local residents, were excluded from the decision-making process.

Third, the Dadu tier was planned to be finished by 2014 as soonest, if its EIA proposal went smoothly. Before the completion of the Dadu tier, the ENP plan had to “borrow” thirty thousand tons of agricultural water every day. In this sense, the ENP plan did not only crowd out future water rights from the agriculture sector, but also plundered existing water rights from them. However, the local agricultural sector did not receive compensation. Neither the MOEA nor the Water Bureau tried to reach reciprocal agreements with the agricultural sectors for these intrusive actions.

To sum up, the state conducted arbitrary actions with very little deliberation in water-extracting plans to supply the ENP plan. The authoritative legacy of the developmental state rendered the MOEA reluctant in receiving multilateral agreement.

### **First Time Administrative Hearing in the MOEA System**

In order to better settle the ENP controversy, the Economic Committee in the Legislative Yuan decided that an administrative hearing had to be held in Dacheng before the EIA committee conducted further reviews. At the beginning, the IDB under the MOEA refused to hold this unprecedented administrative hearing, and claimed

that the EPA should be responsible for holding this public channel since this project was a “private investment.” However, the EPA staff also refused to take this responsibility for they believed that there were no legal sources suggesting the EPA was the supervising agent. With both government agencies passing this hot potato to each other, the MOEA was forced to hold the first administrative hearing targeted on major national-level industrial projects in December 2010 in Dacheng, Zhanghua.

According to Taiwan’s “*Administrative Procedural Act*,” the MOEA could be obligated to hold a preliminary hearing, if needed, to clarify the situation involving conflicts, to exchange information and scientific data, and to arrange a scheme of following official administrative hearings. By law, the official administrative hearing was also required to leave sufficient time for public participation and information exchange. Those rules were trying to ensure that the public debates could be conducted peacefully and reasonably before the policies can be made.

However, as the novice in holding an administrative hearing, the MOEA failed to comply with the regulations, and directly skipped preliminary works before the official hearings. The MOEA even failed to send notices to local representatives. Being quite unprepared, participants had little idea about the attributes of this hearing, and therefore did not trust this mechanism. Because participating citizens were only allowed to speak for three minutes per person, the hearing turned into chaos while

most the participants assumed that the government had already made the conclusion. After a series of violent conflicts, the IDB's vice-director, Lien, was forced to dismiss the meeting without any conclusion being reached.<sup>346</sup> Due to the MOEA's hastiness, an occasion of public deliberation thus turned into a physical battlefield of both sides. Participants constantly yelled, insulted, and even physically attacked their antagonists in the hearing.

Because of MOEA had never held the administrative hearing in their own policy-making system, the staff were very unfamiliar with the rules of this deliberative methods. However, the spirit of deliberation was not entirely deteriorated by this misconduct. In fact, based on this experience, the EPA had been initiating a proposal that MOEA will have to hold certain amounts of administrative hearings before submitting the proposals to the EIA committee.<sup>347</sup> Although the EPA intended to use this method to reach some social consensuses before EIA review started, it will actually forced the MOEA take responsibility in broadening civil participation before making major decisions. This administrative hearing, though appeared symbolic, indicated that the public deliberation could be better implemented in the MOEA if social agreements cannot be reached. The administrative hearing held by the MOEA on a state-patronized project, though still immature, was a milestone in the state's

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<sup>346</sup> Peopo News, <http://www.peopo.org/portal.php?op=viewPost&articleId=72471>.

<sup>347</sup> It was based on the personal interview with the EPA official.

deliberative policy-making. The efforts of the EIA committee and civil groups paid off in setting up this precedent for future.

### **Accountability and Transparency**

In the ENP case, the key to evaluate the government's accountability was whether the state complied with legal obligation and opened up to supervision of checking institutional mechanisms or public monitoring. Therefore, a fully independent reviewing function from government agencies, and transparent information release, were both the keys of the state's accountability. The author finds the positive outcomes from these conflicts were as follows. First, the MOEA started to accept institutional monitoring, and decided to deliver the EIA proposal on petrochemical policy to the EPA in December 2010. Second, the EIA made clear rules in forcing the developer to hold public hearing in local areas before the EIA reviews while the MOEA still exerted great pressure on the EIA.

While politicians still tried to intervene with political expediency, it became increasingly difficult for the central government to penetrate interview mechanisms. For the agencies without monitoring mechanisms, the manipulation of law can easily happen. However, in the ENP case, the economic bureaucrats appeared more careful in respecting the transparency and independence of the EIA review committees, mostly because of the impacts from the lawsuit of CTSP. The politicians may still



chose to manipulate the policy process, but the impacts were less viable on the EIA committee.

### **State's Attempts in Manipulating the Administrative Procedures**

Given the fact that the GP's EIA proposal was not fine enough to pass the EIA review, some involved administrative agencies decided to manipulate the procedures in coordination with the MOEA's orders. Among them, the most significant two examples were the Water Bureau and CPA (Construction and Planning Agency). The administration adopted several unaccountable measures to exert expediency in evading the monitoring of possible checking mechanism.

#### **A. Water Bureau: Irresponsible Water Supply for the ENP plan**

Given the water shortage in local area, whether the ENP plan could acquire sufficient water supply was a fundamental issue in the EIA review, since extraction of under-ground water could cause further environmental degradation. Because the EIA committee members particularly emphasized the salience of water sources in the review, "finding water" became a crucial task for MOEA bureaucrats. As the subordinate agent under the MOEA, the Water Bureau had been responsible to find needed water for the GP in order to protect the ENP plan in passing the EIA review.

However, knowing that it would be very a difficult task given the sensitive environmental condition of local areas, the water authority, to some extent, sacrificed

its professional expertise and thus proposed several irresponsible solutions. The character of expediency in these policies was revealed in the following dimensions.

- **Rely on Future Facilities That May Not Be Realized**

In order to fulfill water demands from the ENP plan, the Water Bureau created several water-extracting programs, including the Dadu tier in Dadu River, Niazui Artificial Lake, and Jiji tier in the accompanied Hushan Dam. These three water-extracting facilities were expected to provide the Zhanghua and Yunlin areas 1.5 million tons of water per day, in theory.

However, there was extremely high uncertainty involving these three water-supply programs. First, the water-collecting programs focus on long-distance transportation would also cause other environmental impacts in different areas. The second question appeared to be challenging government's accountability, because **those programs were not ready to begin anytime soon.** The Dadu tier was just entering robust EIA reviews, and the outcome remained uncertain up to present. In terms of the Niazui Artificial Lake, the Water Bureau had not submitted a relevant EIA proposal for review yet. As for the Jiji tier, because it was a part of Hushan Dam, its operation will mostly depend on the scheme of Hushan Dam. However, the Hushan dam was still in the lawsuit process since the developer illegally started the construction in prior of the EIA.

Therefore, as a matter of providing certainty in the water supply, these three programs were by no means responsible. Rather, these solutions only transferred the environmental costs of the ENP plan to other areas, which may not be included in this EIA review. If the EIA committee accepted these programs as future water-supplying mechanisms for ENP, a very possible outcome may be that these water programs would automatically pass the EIA review in the future because “they have to be approved because ENP needs them.” Otherwise, the ENP plan would encounter water-supply problems if parts of the water-supplying chain were missing. Therefore, these water programs based on evading reviews were actually creating more troubles in other EIA cases.

- **Illegal Supply of Agricultural Water**

During the experts meetings in July 2010, the GP claimed that they had acquired the necessary water provided by the Zhanghua Irrigation Water Association (ZIWA afterwards). However, the EIA committee soon questioned the legitimacy of this water collecting action.

First, during the EIA reviews on the Erlin plan in 2009, ZIWA had reached an agreement with the EIA committee that, due to the scarcity of agricultural water in central Taiwan, the Erlin plan would be the last case in loaning agricultural water for industrial purposes from ZIWA. Therefore, the deal between the GP and ZIWA would

be a violation of previous environmental commitment made by ZIWA.

Second, according to the law in agricultural management, agricultural water can only be allocated to other purposes when drought or scarcity of water occurs. In other words, relieving water scarcity in drought season was the only legitimate reason to make use of irrigational water in other purposes. However, the water supply from ZIWA to the ENP plan would constitute constant water traffic on a regular basis. This constant supply of irrigational water to the industrial sector was an illegal action, but the Water Bureau still endorsed this plan.

In the EIA sessions, the CEO of the GP admitted that he employed his personal connections in ZIWA to retrieve water resources for the ENP plan. The following statement from the GP illustrated the irresponsibility of the water-management agencies:

*“The shareholders wanted this case to go faster, so we thought about the water in the Zhuoshui River. Then we knew that it still took too much time, so I contacted ZIWA. How on earth could I know how they got the water and what kind of promises they made in the EIA review about the Erlin plan last year? All I want is water!”*

*(Quote from the speeches from the CEO in the EIA review)*

During the policy process, the role of the Water Bureau was quite an embarrassment. Rather than being designed for water conversion, this government

agent was ordered to produce necessary “water resources.” Therefore, once the Executive Yuan confirmed that the ENP was a part of the state’s petrochemical policy, this agent was responsible for supplying water in carrying out the state’s policy. Under this circumstance, the boundary between the corporations and the Water Bureau was quite vague. In the experts meetings in May 2010, the Water Bureau officials even represented the GP in sending reports to the EIA members in describing the future water supply for the ENP.<sup>348</sup>

In fact, the water-management officials also recognized that the water supply in central Taiwan was very stringent. However, they were forced to create these programs regardless of the environmental carrying capacity, since they received the direct order from The Executive Yuan to generate water. An official from Water Bureau unwillingly admitted that:

*“The ENP plan was an imperative of the government. As a part of the government, we are obligated to solve the problem, even though we find it very difficult to carry them out.” (Quoted from the speech from the officials from the Water Bureau in the EIA review in May 2010)*

Therefore, as a direct subordinating branch in the MOEA, water-managing agent had primarily acted as an implementing body without being monitored by other

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<sup>348</sup> The Water Bureau did not find it a problem until the EIA members posed challenges against their unclear character. See

agencies. Its expertise and professionalism in allocating water was sacrificed under political intervention. In this case, the Water Bureau had to provide irresponsible programs, which also violated their expertise and law, to meet water demands for the ENP plan. There was little checking mechanism on this administrative manipulation within the MOEA system. Only in the reviewing mechanisms such as the EIA could the regional water usage be comprehensively reviewed.

### **B. Dacheng Wetland Issue**

Next to the planned site of the ENP, there was a 2000-acre of wetland around the Dacheng coastline across the south Zhuoshui riverbank. Because of the rich biodiversity of this wetland, the land is environmentally crucial for conservation purposes.<sup>349</sup> In 2007, while the CPA began selecting national-level wetlands for conservation uses, Dacheng was chosen as the ninth most significant wetland in Taiwan by participating marine scientists. However, in the final confirmation meetings held by the CPA in 2008, owing to the protests of local political leaders supporting the ENP plan, the director of the CPA decided that the Dacheng wetland had to be removed off the list of national-level wetlands.<sup>350</sup>

In the review meetings in 2010, facing criticism from environmental groups, the

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<sup>349</sup> This wetland has been a shelter of several endangered species such as white dolphins and Eurasian curlews

<sup>350</sup> In fact, because the CPA adopted a relatively loose standard in reviewing the importance of wetlands, there were thirty-nine wetlands listed as national level-one shelters in the final selection. However, the Dacheng wetland, as the ninth place regarding its environmental significance, was only listed as a “disputing” one rather than a listed shelter. It signifies the political controversy behind the selection

CPA officials admitted that Dacheng, given its ecological salience, was undoubtedly qualified to be included, as a national wetland, but local politics seemed to step in the way.<sup>351</sup> Because the tag of “national wetland” would bring more legitimacy for conservation actions in Dacheng areas, some local politicians, who treated the ENP plan as a quick booster of the local economy, thus tried to block this conservation action from the CPA.

In February 2010, the CPA decided to list the Dacheng wetland as a national-level conservation shelter to celebrate International Wetland Day. However, a shareholder of GP then wrote to Premier Wu to express his concerns. After the letter was submitted, the Executive Yuan soon asked the CPA to hold this decision to prevent the creation of another obstacle in the ENP project.<sup>352</sup> In this case, the environmental expert’s decision on the wetland conservation was thus again compromised by political intervention. With very little accountability check mechanism, policies can be easily distorted.

The irresponsible water-supplying programs and the removal of the Dacheng wetland off the conservation list both illustrated that the professions of bureaucracy can be easily compromised and manipulated in bureaucratic system. **These twisted decisions only proved that the checking mechanism outside the administrative**

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<sup>351</sup> See the announcement from the Wild Heart Association, <http://zh.wildatheart.org.tw/archives/eeceieciee.html>

<sup>352</sup> See the news from Taiwan Environmental Association, <http://et.e-info.org.tw/node/134>

**branch was crucial in reviewing the legitimacy and efficiency of the state's plans.**

### **More Transparency Created by the EIA**

Since local communities often loathed the petrochemical sector for its highly polluting feature, the EIA reviews were filled with grievances from local residents. Most local residents felt that they were not respected in the policy process, for the corporations only dealt with local governments. While most of the residents needed to work in their hometown, it was a luxury for them to participate in the EIA or public hearings in Taipei. The transparency in the policy was therefore became a significant issue.

To solve this antagonism between both sides and to facilitate the communication, the EPA thus imposed new regulations to release information to the public. In June 2009, the EPA formulated *the Principles of Public Hearings in the EIA* and the *Principles of Public Seminars in the EIA*. Both acts ordered the developers and their supervisors to hold public hearing and seminars in local counties before submitting EIA proposals. The developers and their supervisors were required to notify social groups, local council members, village heads, and other stakeholders ten days before the meetings. The messages must be sent in paper documents and be posted on the EPA website.<sup>353</sup>

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<sup>353</sup> See *the Principles of Public Hearings in the EIA* and the *Principles of Public Seminars in the EIA*, article 3.



Owing to this reform, the developer, the GP, and the MOEA had to hold a series of public hearings and seminars on the ENP plan from November 2010 to January 2011. The Water Bureau was also asked to hold public hearing on the water-collecting programs in rural Zhanghua. In these occasions, local participants were more motivated to express their opinions and to question the policies.<sup>354</sup> Through these approaches, the EIA, as a monitoring agency, successfully opened the black box of decision-making to the public.

### **Resisting Politicians' Intervention in EIA Committee**

Bearing cost of endless waiting, the GP therefore threatened to withdraw the case if the EIA committee did not approve their EIA proposal by June 2010. In response of the corporation's expectation, Premier Wu thus asked the EPA to process the EIA review "more actively." Vice President Hsiao and Premier Wu both pledged that the "ENP plan will start in 2010" and "the EIA review will be completed by 2010."<sup>355</sup>

Because of the time pressure, the EPA spent May, June and July in 2010 conducting experts meetings. In order to facilitate the process, the EPA condensed more than one hundred related issues into four sessions of experts meetings and two

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<sup>354</sup> For example, in the public hearing on Dadu Tier held in December 2010, in face of the challenges from a wide arrays of local residents and environmental groups, the supervisors in Water Bureau admitted that the construction of Dadu Tier needed to be reexamined if the ENP plan failed to pass the EIA review.

<sup>355</sup> <http://times.hinet.net/times/article.do?newsid=3049128&option=finance&isGraphArticle=true>

preview sessions. The EIA members even made jokes about the frequency of meeting sessions as literally “one meeting per week.” This joke showed that the EPA had speeded up the review procedures to meet Premier Wu’s expectation. The EIA and APC committees were both arranged in tight schedules in order to match the developer’s plans.

However, the abysmal quality of the GP’s EIA proposal made it impossible for the EIA reviews to go any further soon.<sup>356</sup> During a series of experts meetings in May and June, the EPA officials have recognized that, in order to have the ENP pass the review, the GP had to make compromises because the negative environmental impacts brought by this plan were proven significant. Because the GP failed to provide credible data to protect environmental quality in adjacent areas, the EPA decided to conduct coordination between the EIA and the GP.

Among those environmental concerns, the conservation of coastal white dolphins drew a great amount of social attention, since it was categorized as an internationally endangered species. While the reclamation of coastal wetland by the ENP plan would potentially block the migration channels of white dolphins, the separation of dolphin schools may cause extinction of this species, which represented a large-scale degradation of marine quality. In June 2010, the director of the EPA,

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<sup>356</sup> Even the environmental consulting company of the GP admitted that this was the most challenging case they ever had, since there was very little time and data to be used while the ecological sensitivity of this case has been widely acknowledged.

Shen, proposed that in order to reach mutual benefits for precious dolphins and ENP plan, the only feasible solution was to preserve an ecological hallway for white dolphins, which meant the ENP plan and its industrial port had to be divided in two different places and connected by a cross-sea bridge. This suggestion from Shen indicated that the bureaucracy was influenced by the legal precedent of CTSP, and became more aware of the possible risks if the EIA failed to conduct a meaningful review. The EPA officials tried to work the plan out by making this deal more acceptable for both sides. This autonomy of bureaucracy, though limited, allowed more room for comprehensive EIA reviews.

However, the GP still declined this initiation because this cross-sea bridge would increase cost by an additional 24.5 billion NTD. The CEO, Chen, stated that the shareholders of GP would not agree to spend this amount of money on protecting white dolphins. The MOEA also suggested that the ENP plan should remain unchanged since any design change would hinder the “utility of the investment.”<sup>357</sup> Encountering the dilemma, the EPA director had to publicly urge the GP to bear more social and environmental responsibility.<sup>358</sup>

Instead of taking advice from the EPA, the GP claimed that they would initiate a “guiding program” to settle this issue. According to the GP’s proposal, the company

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<sup>357</sup> See the official announcement from the Industrial Development Bureau, <http://www.moeaidb.gov.tw/external/ctrl?PRO=news.NewsView&id=9761>

<sup>358</sup> UDN News, June 10, 2010.

will adopt “feeding methods” to guide the dolphins to bypass the reclaimed coastal lands. This alternative was an empirically untested and theoretically arguable solution, and it did not receive any credible support from the animal science community. Although most of the marine scientists and EIA members were very suspicious about the feasibility of this method, Premier Wu surprisingly echoed this idea. He stated:

*“White dolphins have their own ways to survive and to swim. If they can make turns in the Taichung Harbor, they can make turns in Zhanghua. Unlike cars, dolphins can make turns at their own will.”*<sup>359</sup>

This superficial statement was simply a political intervention for both the independence and professional expertise of EIA committee. Although this was not the first time that Premier Wu decided to personally intervene for the EIA process, like he did in the Erlin plan in 2009, the EIA committee did not buy GP’s proposal this time. In four sessions of experts meetings and two preview sessions during the EIA, the participating experts all came to the conclusion that the sessions were “incomplete” and were still awaiting more credible proofs. The EIA members even initially added another experts meeting on carbon issue, and made the review sessions even longer.

While the GP and Premier Wu both expressed their strong desires in have the ENP plan to pass the EIA as quick as possible, the EIA members stated that it would

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<sup>359</sup> UDN News, July 7, 2010.

be impossible to approve this case as the GP expected. The committee members concluded that since the GP was not fully prepared, a more reasonable date to expect the approval of the EIA review would be the end of 2010 or much later. In fact, the ENP plan was still under the review up to the April 2011, and there was little sign suggesting that the EIA committee would approve it soon. This strong position of the EIA committee clearly conflicted with the political directives of the KMT politicians.

### **Adjust and Learn: Better Accountability and Autonomy of the Checking Mechanisms in the ENP Case**

Normally, when the state officials strongly showed their determination about government-patronized plans, it gave the EIA members political hints when making decisions. With little intention to challenge the government, each EIA member felt hesitated to be the first one to pull the trigger. This problem of collective actions thus contributed to the fact that the EIA members could only focus on trivial problems such as pollution abatement when they sensed strong government's patronage behind the projects. The EIA members were more reluctant to challenge the core issues directly, but tried to circle around or to add provisos to the final decision. The conditional approval of the Holi and Erlin plans were typical examples.

During the review sessions on water-supplying mechanisms for the ENP in March 2010, the EIA committee has been quite about the Dadu tier project despite

most of the EIA members still holding doubts about this water-collecting mechanism.

One of the EIA members privately admitted that:

*“If we rejected this proposal, then it was very likely that the developer would deliver a more problematic one. The current EIA system was not strong enough to keep it from the government’s intervention. If the developing behavior was not stoppable, then probably we should just choose the better solution.” (Quoted from the interview with the environmental activists)*

However, he also addressed:

*“It was very often that only when there was an EIA member pulling the first trigger that the rest of them would start to join this battle vigorously. This was our national character of being gregarious”.*

This statement proved that the EIA members often felt powerless when political intervention appeared stronger. The EIA members sometimes were bothered by their low self-efficacy in such an important occasion. However, although political intervention still prevailed in this case, both the EPA bureaucrats and EIA committee members did perform better autonomy in the ENP case.

For example, according to GP’s original proposal, the estimated VOCs emission brought by the ENP plan would be 4362 tons per year. This amount would consist of three percent of the total VOCs emission in the central Taiwan area. Before the EIA

reviews began, the Air Pollution Branch of the EPA had criticized this high volume of emission. He believed that this high volume of emission would not only deteriorate air quality in the central Taiwan area, but also jeopardize the ‘VOCs Emission Reduction Plan’, a plan, proposed by the EPA, to cut at least 31 % of the total emissions by 2015. The EPA staff thus suggested that the EIA members should force the GP to reduce VOCs emission up to 50%. It was quite rare that the EPA staff perform a guardian role in front of EIA reviews.

The origins of this better accountability partly came from massive public participation into the ENP case, granted by the participation and transparency produced by deliberative measures. Both the legal lawsuits against the CTSP filed by environmental lawyers and massive participation of local communities in the public hearings caused a tremendous impact in countering the state’s power.

Since the legal disputes broke out on the CTSP case, the EPA officials started to pay more caution to legal responsibilities. After the legal struggle from 2006-2010, the Supreme Court finally ruled that that the EIA review on the CTSP’s expansion in Holi-Chixing and Erlin plan should be voided due to the lack of discretion in the EIA review. Therefore, the EPA particularly paid attention to possible flaws of the EIA reviews in the ENP case. The legal precedent from the Holi-Chixing and the Erlin verdict forced them to be more cautious in the possibility of violating legal

procedures. In the review sessions of the ENP plan, the EPA officials insisted that the GP had to conduct all necessary research before starting the EIA review. Therefore, although Premier Wu gave specific orders in facilitating the ENP, the ENP was not able to complete it in 2010.

Furthermore, the massive social campaigns against the ENP also gave supports to the EIA members. In June 2010, a group of eighteen honorable research fellows in the Academia SINICA (the National Central Research Institute, the supreme research institute sponsored by the central government) publicly opposed the ENP plan. Within two months, there were more than one thousand college scholars and public figures joining this campaign. This campaign created a safe cushion for the EIA member to hold a stronger position, since the social campaign led by the scholars created legitimacy for the EIA members in challenging this plan from a scientific perspective.

Once the first strike was launched, the snowball effect soon broke the barrier of collective actions. Almost all of the EIA members joined the choir in reprimanding the GP's proposal. While the experts meetings in the CTSP Erlin plan were proven as a loophole in the EIA, the series of experts meeting on the ENP plan appeared to be more environmentally responsible.

Besides, a powerful industrial accident also played a part when a similar facility in Formosa's SNP exploded twice in July 2010. These explosions caused an economic



loss equivalent to 0.3 billion USD.<sup>360</sup> Suffering from the SNP's pollution for a long time, the local residents in Yunlin besieged the SNP for months in protesting. The industrial accidents also contributed to setting up a negative image for the petrochemical industry, and indicated the malfunction of the industrial management and monitoring after the unsound EIA review.

Influenced by this massive social participation, the state was not able to implement this plan with administrative manipulation. The MOEA had to file the first "EIA report on petrochemical policy" to the EIA, and listed different developing plans for public discussion. This improvement on state accountability and transparency, though were ignored by the developmental state of Taiwan before, were proven significant in correcting the state's inefficient plans through strong monitoring. Although the developmental state of Taiwan was not used to this change, the participation of civil sector through checking mechanisms proved very significant.

Owing to the monitoring function of EIA reviews, the Taiwanese government and society had more time and room to conduct public debates on this issue. The former DPP Premier Su Zhenchang, who had enthusiastically pushed for these major investments in his term, officially confessed that the DPP's petrochemical policy on the ENP plan in his term was "a mistake."<sup>361</sup> In their presidential campaigns, Su and

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<sup>360</sup> UDN News, July 25, 2010. <http://udn.com/NEWS/NATIONAL/NAT2/5746242.shtml>

<sup>361</sup> China Times, March 26, 2011. <http://news.chinatimes.com/focus/50108389/112011032600120.html>

former Premier Cai both pledged to stop this investment if they are elected as Taiwanese president in 2012.

## **Conclusion**

Overall speaking, the Taiwan state's policy on petrochemical industry in this decade could not be defined as a market-conforming developmentalism, since it was not based on maximizing interests for petrochemical industry. On the surface, the legacy of Taiwan's developmental state had particularly emphasized the significance of establishing naphtha-cracking facilities in Taiwan because of its salience in industrial chain. Rather, it actually served a more general goal – keeping the capital in Taiwan. **The intentional blocking of petrochemical industry flows to China by using the ENP as a threshold illustrated the state's basic intention to control capital.** While the state remained powerful in regulating capital outflow, the authoritarian legacy of the developmental state led to a petrochemical policy with little efficiency.

While overproduction of petrochemical raw materials had become a potential danger in both Taiwan and China, this expansive policy on the ENP would encounter serious problems while the ENP may not be capable to digest the overstock in the future. Besides, as the petrochemical industry showed great interests in migrating to China both because of the expansion of ASEAN and China's protectionism, the ENP

plan may be considered rather a bargaining chip between the Taiwan state and the petrochemical industry than a profitable investment. While the technology of naphtha-cracking was not associated with business secrets, the target that the government aimed to protect was not technology or the industry, but the state's control in capital. **This politics-oriented policy could hardly achieve market-conforming success because the comparative advantage of enlarging this sector may not exist.** Its huge amount of negative external costs was even more important for a small island without natural resources, since the petrochemical industry was an energy-intensive sector.

While the state tried to push through this policy, the politicians found that it was increasingly difficult to manipulate the checking mechanisms because of the increasingly strong monitoring of social sectors and monitoring agencies. With the social campaigns led by scholars and a crucial verdict from the Supreme Court on the CTSP case, as the example, the bureaucrats started to adopt a deliberative approach in solving this issue and paid more respect to the checking mechanisms. **The massive social participation granted by these institutional arrangements thus prevented the administration from further manipulating the review procedure.** The stronger monitoring from government's checking mechanism and civil sectors eventually led to the state's re-evaluation on its previous flawed petrochemical policy.

## Chapter 6 Conclusion

The legacy of Taiwan's developmental state rendered itself concentrating on previous patterns. The techno-bureaucrats tended to promote capital-intensive programs without carefully evaluating their economic efficiency. In the three cases examined by this dissertation, the opportunity costs and external costs all appeared considerable compared with the profitability of these inefficient projects. Because of the state's intention to control capital outflow to China and Vietnam, the Taiwan state was persistent in carrying out these projects by intervention with political leverage.

### **Developmental States and the Impacts of Democratic Transition**

While developmental states were often argued incompatible with democratic regimes, this dissertation demonstrated the opposite prospect. It showed that the status of Taiwan's developmental state remained firm after democratic transition given that the state was still autonomous in terms of defining and preserving national interests. The techno-bureaucracy still showed great enthusiasm to economic growth based on a mindset of "late comer" developmentalism. As one of the MOEA officials described,

*"The huge capital brought by these projects was too precious to be given up. We are still far behind developed countries. Therefore, we could not afford not growing.*

*Continuous rolling of the growth rate is imperative to this country. The alternatives and other models can wait until we catch up with developed countries.”*

In terms of the salience of economic bureaucracies in Taiwan, he also argued that, “Normally we made most of the decisions regarding economic affairs. In FSP, CTSP and ENP cases, the Premiers often listened to us when we concluded that these projects should be done for Taiwan’s economy. The Executive Yuan normally approved all of our initiations. There was barely any re-evaluation on those projects at the higher level. In fact, there was no need to re-evaluate them. How can it be wrong with more investments?”

From the perspective of Taiwan’s MOEA, it had been devoted it to stimulating Taiwan’s economy by promoting as many domestic investments as possible. Its dedicated efforts granted its dominant role in the state’s decision-making. That was precisely the spirits of developmental states. However, without a comprehensive supervision system, the policies formulated by strong bureaucrats were left unchecked. This dissertation proved that **the Taiwan’s MOEA, due to the lacking of accountability and deliberation, ended up with promoting risky investments with little consideration on social and market constraints**, for they assumed that preserving capital in Taiwan was the first priority.

However, the EIA system ensured by democratic transition had a profound impact

in correcting these mistakes. Although the new government formed by the DPP was also co-opted by the MOEA in endorsing these policies, **the new elements brought by the democratic transition was influential in creating a public sphere in monitoring the state's industrial policies.**

First, the DPP's previous experience in environmental activism created a more deliberative EIA committee. The inclusion of grassroots activists in the EIA procedure from 2005 to 2007 empowered the social groups to better recognize both the cost-effectiveness of policies and routine practices of institutional supervision. Although the grassroots activists eventually were removed from the EIA committee in 2007, their expertise in practicing the EIA review allowed them to exert their influence in both shaping social pressure and filing legal actions against the government's policies.

Second, the temporary segregation between the KMT and the developmental state offered a better chance for the checking mechanism to function with less political intervention. Compared to previous KMT administration, the DPP politicians generally showed more respect to checking institutions because they were more unfamiliar in adopting administrative manipulation within the system. Both the autonomy and the function of the EIA and the APC had great improvement under the

DPP administration.<sup>362</sup> **This autonomy, consolidated by massive public participation, increased the difficulty of manipulation even when the KMT regained their power after 2008.** A statement from the MOEA official described the changes in the EIA committee after 2005:

*“Before the CTSP and ENP plans, the EIA reviews were simply negotiations. The EIA committee would raise the standard a bit higher to prove that they did their jobs, and we would accept their term since they were just trivial problems. Ever since 2005, we found the EIA committee non-negotiable. We were forced to conduct research, to hold administrative hearings, and to do policy EIAs. Even so, we were still nowhere near the EIA committee’s standards.”*

Therefore, democratic transition opened a door for the possibility of monitoring the state’s behavior, and it was **the public participation and institutional monitoring that through this door reinforced the developmental state in Taiwan by correcting the state’s errors in conducting inefficient projects.** Through the interdependent governance within the review mechanisms, these industrial programs were smoothly postponed. Some programs were even called off by corporations themselves. The increasing deliberation generated by public participation in the public checking mechanism, though still at the initial stage for a developmental state,

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<sup>362</sup> Most EIA members admitted that the EIA meetings and public hearings held under the DPP administration allowed more room for discussion and different opinions. Generally, the involved government agencies could tolerate longer review process and more radical protests under the DPP administration before 2008, particularly during Hsieh’s term as Premier (2004-2007).

has improved the state's accountability for public policies in Taiwan to some extent. The state was forced to review their inefficient policies driven by political considerations, and it finally conformed to economic rationality.

**Table 6.1 the Influence of the EIA on State's Industrial Policies**

Cases	Sectors	The changes of industrial policies caused by the EIA review
FSP	Steel	The Formosa decided to withdraw the FSP plan in Taiwan and started in Vietnam in 2009, where the economic efficiency can be better reached.
CTSP	LCD Panel	Because of the verdict from the administrative court, the state was forced to unhook the CTSP's Erlin plan with the AUO's investment in China. Both Holi-Chixing plan and Erlin plan were demanded to stop in August 2010.
ENP	Petrochemical	The MOEA has encountered strong resistance from the EIA committee, and the state may be forced to lift the ban on the investment on the naphtha-facilities in China in May 2011.

Source: Compiled by the author.

### **Taiwan's State Capacity: the Comparison on Three Cases**

In terms of the five indicators on state's capacity in this dissertation, the author concluded some features from Taiwan's industrial policies on these grand plans.

First, in terms of the state's *autonomy*, the actions of the state in these three cases verified Weiss' argument. The path-dependent nature made it difficult for Asian developmental states to adopt the liberal model even after democratization, for states still had fundamental needs to control the capital. States had to remain autonomous to regulate capital outflow, despite that some of the capital migration may be categorized



as more market-conforming strategies. While the DPP has considered itself a more liberal party compared with the KMT, the partisan difference on state's autonomy was not significant, for both parties revealed strong intention to prevent capital outflow.

**Table 6.2 the State's Autonomy in Three Cases: the Comparison**

	Limitations on capital outflow	Close relationship between politicians and corporations	State's overall autonomy from business interests
FSP	N	Y	Moderate
CTSP	Y	N	Strong
ENP	Y	N	Strong

Source: Compiled by the author

As far as the state's **penetrative capacity** is concerned, the democratic regime in Taiwan, to some level, indeed has weakened the state's penetrative capacity into business groups and local politics. The state found it increasingly difficult to co-opt corporations and local resistance complying with the state's unilateral agenda. In all the three cases, local politics appeared crucial because the state was less capable of implementing the policies without local politicians' cooperation.

**Table 6.3 the State's Penetrative Power in Three Cases: the Comparison**

	Penetration to local counties	Penetration to the corporations	State's overall penetrative power
FSP	Weak	Weak	Weak
CTSP	Moderate	Moderate	Moderate
ENP	Weak	Weak	Weak

Source: Compiled by the author

The third indicator is **economic rationality**. In this dissertation, the state's patronage in all the three cases was not primarily based on economic efficiency, for over-production and low-profitability appeared to be the common features of these capital-intensive projects. Rather, these policies served a more political goal as accumulating capital input in Taiwan. Although the techno-bureaucrats remained powerful in the decision-making process, they tended to adopt familiar patterns in invigorating economy. In Taiwan, most elected politicians were convinced by techno-bureaucrats' expertise and eventually found a common ground with the MOEA, since they also had needs to pursue constant economic growth. To be more precise, these politicians' efforts striving for "the image of prosperity" by providing immediate benefits brought by new investment were an important feature of those in developmental states.

**Table 6.4 the State's Economic Rationality in Three Cases: the Comparison**

	1	2	3	4	5	6	State's economic rationality
FSP	No	No	No	Arguable	No	Y	Weak
CTSP	No	No	Yes	Yes	Yes	Y	Moderate
ENP	Yes	No	No	Arguable	No	Y	Moderate

1. Remove major supply and demand bottlenecks
2. Integrate the economy
3. Internalize a particular technology cycle
4. A motor to regional development
5. Open new markets and supplies
6. Contribute to industrialization

Source: Compiled by the author

Fourth, in terms of the indicator of **deliberation**, these cases showed that deliberation within policy-making institutions was not satisfactory, because the MOEA and the Executive Yuan tended to prioritize “the efficiency of policy-making” with less consideration on “economic efficiency” of these grand plans. However, public deliberation generated from the EIA reviews began to gain its salience in influencing policy outcomes after democratic transition. Although the MOEA and the Executive Yuan tried to avert this time-consuming monitoring, the inclusiveness of local communities and civil groups in the EIA reviews brought more momentum in building a public sphere for debates. In the FSP case, the widespread criticism in the EIA reviews induced a series of the state’s introspection. The MOEA eventually concluded, in 2010, that the establishment of the FSP may not be the optimal outcome for Taiwan’s steel sector. For the ENP cases, the former DPP politicians also confessed, in 2011, that they have been making mistake in promoting the ENP plan during their term. **Overall, the state’s deliberation capacity, owing to the contribution of policy EIA and public hearings, has increased from 2005 to 2010.**

**Table 6.5 the Level of State’s Deliberation in Three Cases: the Comparison**

	Inclusiveness	Scrutiny	Developing Skills and Understanding	Creating Differences	State’s overall Deliberation Capacity
FSP	Weak	Weak	Moderate	Moderate	Weak
CTSP	Weak to Moderate	Weak to Moderate	High	High	Moderate to High
ENP	High	Moderate	High	High	High

Source: Compiled by the author

Finally, the *accountability* of the state’s industrial policies in Taiwan appeared to be low, for the MOEA had no experiences being restrained by civil groups, stakeholders, and monitoring institutions before. The MOEA and the Executive Yuan thus constantly adopted manipulative measures to evade public and legal monitoring since they were anxious about promoting industrial plans. The EPA, as a subsidiary unit of central administration, often joined the administrative agencies, conducting expediency and manipulation.

As a result of the efforts of activists and specialists in the EIA reviews in circulating information and drawing social attention, **the state had been held increasingly accountable in terms of policy making.** The verdict from the administrative court, facilitated by activists, made the state bureaucrats more cautious in following legal procedures in most cases after the CTSP plan. This direct link between the state’s accountability and bureaucrats’ administrative responsibility may

better ensure the independence of EIA committees. After the legal dispute of the CTSP, the ENP plan received stricter examination in the EIA reviews, and there were few signs suggesting this case be approved by the EIA in the near future. This indicated that the accountability of the state has been strengthened by civil participation in policy monitoring.

**Table 6.6 the Level of State’s Accountability in Three Cases: the Comparison**

	Horizontal checks	Vertical checks	Transparency	State’s overall accountability
FSP	Moderate	Moderate	Moderate	Moderate
CTSP	High	High	Moderate to High	High
ENP	High	High	High	High

Source: Compiled by the author

In conclusion, according the three cases in this research, the author suggests that in Taiwan, the penetrative capacity and economic rationality of the state seemed declining after democratic transition, the state autonomy remained strong, and deliberation and accountability of the state had improved in these five years. Therefore, Taiwan is still a developmental state with the techno-bureaucracy dominating national economic policies and controlling capital. The democratic transition did not lessen politicians’ pursuit of constant national economic development; moreover, it brought in correcting mechanisms and thus further reinforced the capacity of the developmental state. On the one hand, democracy might

deteriorate the developmental state's autonomy by opening the policy door to corporations, local politicians, and civil groups; on the other hand, it also strengthened state's capacity in deliberation and accountability.

### **Rebuilding the Developmental States: Civil Involvement and National Planning**

This dissertation has implications on the relevant research of developmental states in Asia. As the cases showed, the MOEA in Taiwan has been troubled by massive capital outflow. In order to preserve capital, the MOEA had to set limitations on the capital flow and promote these three projects even when it acknowledged that those projects might be economically inefficient. The tendency of transnational capital moving to areas that are more peripheral has constituted great constraints on economic bureaucrats' rationality, as they believed that economic growth could not be assured without continuous investments. In other words, the impact of democratization on the developmental state may not be as significant as the impact of capital outflow and biased rationality was on the developmental state in Taiwan.

Therefore, the situation of Taiwan, like other previous developmental states, was actually in a quandary. On the one hand, these developmental states, while identifying themselves as "late-comers," still tried to catch up with developed countries with specific developing strategies and sectors. On the other hand, the more recently

emerged “late-comers” such as China and India are eroding the comparative advantages of these “older” developmental states. Hence, these developmental states found themselves caught in an awkward predicament, and the available options have suddenly become complicated. They may choose to stick with previous sectors and limit the capital outflow with the costs of competing against newly industrialized countries. Alternatively, they may choose to find new potential markets to enter. With these options ahead, the developmental state also needs to evolve accordingly.

This dissertation has proved that the previous hierarchical pattern for some developmental states may lose its validity since comparative advantage of different sectors may change over time. Those early developmental states would encounter a hardship if they simply followed the old paths, since wages and rents have largely increased with the economic growth. The three cases in this dissertation suggested that, although these sectors had great contributions to Taiwan’s economic growth before, the MOEA’s continuous promotion of these projects failed to reflect the changes of domestic industrial structures and people’s new demands of alternative development. These twisted policies indicated that the current decision-making structure within the Taiwan state had difficulties to measure the opportunity costs and external costs of the developing plans accurately. In short, the findings of this dissertation echoes Evans’s argument that deliberation would emerge as the most

important state capacity on development.

The problem that Taiwan was facing was, in order to improve the state's competitiveness, the government had to provide both efficiency and certainty under democratic regimes, and the bureaucrats found it very difficult to remain efficient with the monitoring mechanism around. However, this dissertation has indicated the potential risks of the state's unilateral dominance on making policies and has confirmed the positive impact of checking and monitoring mechanisms on policy outcomes. It should be noted, nevertheless, that simply passively reacting to state policies via these mechanisms might not produce efficient policy outcomes. In order to improve both the efficiency and the quality of decision-making, deliberation among social and state actors has to be sophisticatedly operated before any major national plan is completely formulated.

The case studies on Taiwan's developmental state suggested that civil involvement in the developmental state would be increasingly essential in the future. Due to the struggles in the EIA review in these cases, the Taiwan government realized that the state needed a public sphere to launch policy dialogues between public and private sectors. For instance, in order to identify ways to efficiently use energy, the Taiwan government held energy forums and invited civil groups and industries to participate in the Energy Roundtable Forum in both 2005 and 2009. However, simply



including the private sectors into the policy-making process was not enough. One of the participating experts once commented that the forum could not move any forward without a comprehensive policy system on industrial policies. Therefore, other than incorporating the private sectors, a new policy platform for national developmental plans may be very much needed for the developmental state to reinforce its capacity.

“The Pilot Agency” has been considered an essential element of the developmental state. The Taiwan government indeed had these agencies, such as IEK and CEPD, which were established for pursuing economic growth during 1980s. However, with various possible developing alternatives ahead, the current decision-making system was proven outdated, for they could barely integrate external costs and international constraints into account. Because those agencies were only responsible for the balls in their own course, policy outcomes thus became fragmented without a coordinative platform to guide comprehensive national development. Therefore, Taiwan’s cases suggested that an institutional channel for deliberation at a higher governmental level was imperative to sustaining the developmental state.

Having that said, it is still too early to make predictions about the destiny of Asia’s developmental states, given that these countries have different trajectories in national development. A more wide-ranging research which incorporates Korea,

which has reached considerable success on software and cultural industries recently, and China, which has built a national economic planning agency in guiding fast economic growth (National Development and Reform Commission, NDRC), may seem necessary in making further arguments regarding the adaptation of developmental states.

### **Future Focus on Taiwan's EIA System**

Although the EIA was proved influential in enhancing the state's deliberation and accountability in Taiwan, some issues are worth discussing in the future.

#### **A. The Special Features of Taiwan's EIA System**

Unlike the EIA in the US and most countries, the EIA system in Taiwan was quite distinct. While the governments in most countries would ask the policy initiators, the MOEA in Taiwan's case, to hold the EIA reviews as policy guidance, Taiwan's *EIA Act* handed this mechanism to the EPA and granted a "veto power" to the EIA committee. This independent feature created more potential to form a powerful checking mechanism regulating the state's industrial policies, especially for a strong developmental state.

However, this power segregation also caused a great amount of administrative inefficiency. Because of the high costs in coordination within government branches, the EPA, MOEA and the central administration are considering to return this power to

the policy initiators, since the EPA conceived that it was a heavy burden to hold the EIA reviews on all major developing actions, particularly with the veto power at hand. While some legal experts maintain that allowing the decision-makers to conduct EIA reviews as a policy advisor would be more appropriate to maintain the consistency and certainty of the policies, environmental groups argue that the system of check and balance needs to exist in Taiwan because there is no institution of higher levels to hold the MOEA's policies accountable. Therefore, the current EIA system is by no means perfect, but it appears to be the last line of defense in ensuring the quality of the policies. Before the state gets a hold of better institutional designs of evaluating different developmental agendas with quality deliberation, the conflicts surrounding the EIA review can be considered a series of "trial and error" experiments on the path searching for a greater accountability of the state.

### **B. Representation Problems in the EIA**

Although the EIA review has functioned as an institution of deliberation and monitoring, the legitimacy of the EIA committee members was still very problematic. As one of the former cabinet member suggested,

*"The power of the EIA members is unreasonably enormous. These fourteen members entirely decided the destiny of thousands of others. They are neither elected nor sent by any social groups, but are allowed to make decisions simply based on*

*their own will without needing to respond to the society. In my opinion, they are just simply too powerful in this democratic system.*"<sup>363</sup>

Indeed, while the Legislative Yuan and the EIA system could check the MOEA's policies, the EIA members were making decisions without many constraints. Their mandate and accountability were unclear, since they were not considered government employees by law. There was also very few efforts in building a mechanism avoiding the conflicts of interests by the EIA members, since some EIA members were associated with research grants from the government and environmental consulting companies.<sup>364</sup> This democratic deficiency could be a danger in a closed decision-making system.

Besides, because the selection of EIA members was based on their scientific expertise, it was often difficult for the MOEA staff and local residents to communicate with the EIA members on science issues. Rather than participating in the EIA reviews as equal stakeholders, the actions of MOEA, local communities and environmental groups were more like political lobbyists. These stakeholders could only make statements and passively wait for the final call from the committee. This top-down pattern in decision-making made the authority of the EIA review quite

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<sup>363</sup> This was quoted from Lin Siyao, the vice secretary of Executive Yuan in Su's term during 2005-2007. <http://www.udn.com/2006/7/3/NEWS/FINANCE/FIN1/3386618.shtml>

<sup>364</sup> In December 2010, the environmental groups pointed out that some EIA members were contracting government's health risk assessment on the ENP. However, there was hardly any action taken on this issue.

problematic. The veto power of the EIA review entitled the committee members an immense political authority, but it was politically inappropriate that this authority could neither be restrained by any political institutions nor be challenged by stakeholders without scientific proficiency. This “scientific authoritarianism” may erode the democratic elements since the public was more capable of monitoring politics, not science.

### **C. The Future of Legal Approach by the Civil Groups**

While the legal lawsuits against the government in the CTSP cases were proven influential in changing the state’s policies, the legal approach also had its limits. It was not an easy task to fully transform court orders into administrative codes. Although the EPA formulated the “*Technical Codes on Health Risk Evaluation*” in April 2010 to respond to the court verdict, there was still a large grey area in those technical codes. The biggest problem in these codes was the neglect of environmental background information, and thus the existing pollution could be separated from the new ones. In other words, even if the planned site has been seriously contaminated, the developing action could still manage to pass the evaluation if this plan was technically tolerable in the lab where the local environmental parameters were not taken into consideration in the evaluation.<sup>365</sup>

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<sup>365</sup> See Lihpao, July 18<sup>th</sup>, 2010. <http://www.lihpao.com/?action-viewnews-itemid-97996>

The example above illustrated the fact that there was a great gap between legal reforms and good policy-making. Therefore, in terms of enhancing the state's deliberation of accountability, the legal approach was only a good start, but definitely not an answer. Although civil lawsuits represented a magnificent progress in this democratic regime, it was still not sufficient for the government to make good policies. The Taiwan state still needs a sophisticated institutional arrangement reflecting different visions to manage developmental agendas efficiently and more creatively.

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