

Research Paper No. 2006/76

## **Rethinking Import-substituting Industrialization**

Development Strategies and Institutions  
in Taiwan and China

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July 2006

### **Abstract**

Conventional explanations of Taiwan and China's economic success point to the shift from an import-substituting industrialization (ISI) strategy to an export-oriented industrialization (EOI) strategy. This paper argues that the development strategies in Taiwan and China have always been a combination of ISI and EOI strategies during their entire miracle-creating period; far from the shift from ISI to EOI strategies, export promotion was used in both cases to sustain ISI, which has always been the central focus of development. Behind this strategy there is a set of institutions in both Taiwan and China, which has played a key role in supporting ISI, in particular, the government, the bank sector, public enterprises, and their relationship.

**Keywords:** import-substituting industrialization, export-oriented industrialization, development strategies, institutions

**JEL classification:** N15, N45, O20, O53

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This study has been prepared within the UNU-WIDER project on Institutions for Economic Development: Theory, History and Contemporary Experiences, directed by Ha-Joon Chang.

UNU-WIDER acknowledges the financial contributions to the research programme by the governments of Denmark (Royal Ministry of Foreign Affairs), Finland (Ministry for Foreign Affairs), Norway (Royal Ministry of Foreign Affairs), Sweden (Swedish International Development Cooperation Agency – Sida) and the United Kingdom (Department for International Development).

ISSN 1810-2611      ISBN 92-9190-854-1 (internet version)

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Camera-ready typescript prepared by Adam Swallow at UNU-WIDER

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## **Introduction**

There is little dispute about the economic miracles created by Taiwan in the 1960s and 1970s and China in the 1980s and 1990s, average double-digit growth figures in both cases were recorded for almost 20 years, which only a very few countries have achieved in the post-Second World War era. However, how the miracles were created has been subject to various debates. A conventional argument points to the shift from import-substituting industrialization (ISI) strategy to export-oriented industrialization (EOI) strategy in both Taiwan and China as the key to their economic success. While the former emphasizes infant industry protection, aiming to replace imports with domestic products by building one's own industrial capacity, the latter stresses exports and upgrading one's industrial structure from labour-intensive to capital-intensive industries gradually as exports make the initial success.

This study argues that the development strategies in Taiwan and China have always been a combination of ISI and EOI strategies during their entire miracle-creating period; far from the shift from ISI to EOI strategies, export promotion was used in both cases to sustain ISI, which has always been the central focus of development; and finally, there is a set of institutions in both Taiwan and China which played and is playing a key role in supporting ISI, in particular, the government, the bank sector, public enterprises, and their relationship.

To compare Taiwan and China, they should first have a compatible basis. The differences between Taiwan and China are obvious. China has a much larger internal market. China is also a regional power if not a world power, while Taiwan is small and without much political and military power. However, the two cases discussed in this study also share some striking similarities, which are often overlooked. Taiwan of the 1960s and 1970s was firmly ruled by the Kuomintang party (the KMT party or the nationalist party), which actually shares some fundamental similarities with its counterpart on the mainland. The KMT is also a radical and leftist party. Even in Taiwan, its organizational structure was still much like that of a Leninist party. The economic thought as a key part of the party's founding principles was described by the party's founding father – Sun Yat-Sen – as 'socialism' (Li 1968: 2). So it is no surprise to see the KMT state in Taiwan has one of the largest public sectors in the non-communist world. Even the key leader of the KMT state, Chiang Ching-Kuo who became the premier of Taiwan in the early 1970s, and the president later, was trained in the Soviet Communist party school. All of the above discussion suggests that despite the differences in size and international positions, Taiwan and China have a compatible political and economic foundation, especially in relation to the two miracle-creating periods, that is, Taiwan of the 1960s and 1970s and China of the 1980s and 1990s.

However, the differences do make Taiwan a hard case for the argument of this study. When market size is small, import-substituting industries can quickly fill the market with their products, and further expansion of such industries is therefore limited. A large country has a large domestic market, so it is relatively easy for such a country to engage in ISI. China is not only a large country but also a regional power; it seems usual for ISI to top the agenda for the leaders of new China in 1949 with its emphasis on the development of heavy industry from the beginning, and given China's size and international ambition, it is also not hard to understand why the development of

heavy industry continued even after China opened to the world in the early 1980s. Taiwan has a small market; it is therefore hard to sustain ISI, so it needs an extra push to combine ISI and EOI strategies and keep them in place for 20 years. This study discusses Taiwan first, and then China.

## **ISI in Taiwan's policy transition**

### **The conventional view and its problems**

In standard economic analyses, Taiwan's post-1949 industrialization is often divided into four phases. In the first phase, from 1949 to the late 1950s, Taiwan engaged in primary ISI. In an attempt to shift from imports to the local manufacture of basic consumer goods, the government promoted the development of textile, food, and other labour-intensive *industries*. The second phase, from the late 1950s to the late 1960s, was an era of EOI focusing on labour-intensive *products*. In this period, Taiwan's economy began to take off, and rapid industrial growth was maintained for more than two decades. The third phase of Taiwan's industrialization extends from the early 1970s to the early 1980s. Exports continued to be promoted, and began to move from labour-intensive products to higher value-added and skill-intensive ones. At the same time, Taiwan engaged in so-called secondary ISI, which involved using domestic production to substitute for imports of a variety of capital-intensive manufactures: intermediate goods and capital goods. Heavy and chemical industries were promoted, along with several big public infrastructure projects. Finally, the fourth phase from the early 1980s onwards involved major government focus on the development of technology-intensive products.

It has been argued that since the early 1960s, export promotion was a major feature of Taiwan's economic policy, and made a great contribution to rapid economic growth. Various studies (for example, Gereffi and Wyman 1990) compare Taiwan's shift to EOI with continued ISI in other developing areas. ISI is often found to be the most likely cause of economic inefficiency in domestic industries and balance of payment problems. Taiwan's ISI in the 1950s has also been seen as having those problems. Thus, as Haggard and Pang (1994: 47) note, '[t]he standard interpretation of Taiwan's postwar economic history identifies a relatively sharp break in policy and economic structure in the early 1960s'. Neoclassical economists in particular see this break as the key to Taiwan's economic success (Woronoff 1986, World Bank 1993).

The conventional explanation of this policy shift usually put forward by economists (such as Ho 1978, Kuo et al. 1981, Kuo 1983), but also by some others (such as Gold 1988), points to two factors. The first involves economic needs. It is argued that as the Taiwanese local market is small, by the end of the 1950s it could not fully absorb domestically produced goods. Thus, it became necessary to develop the export market. The second factor explaining Taiwan's policy shift in the early 1960s points toward American influence (for example, Cumings 1987). It is argued that towards the late 1950s, the US government began to encourage Taiwan to develop through economic liberalization with the aim of reducing and eventually terminating economic aid. In 1959, US official Wesley Haraldson offered the Taiwan government an eight-point economic programme that called for a reduction in military spending, non-inflationary

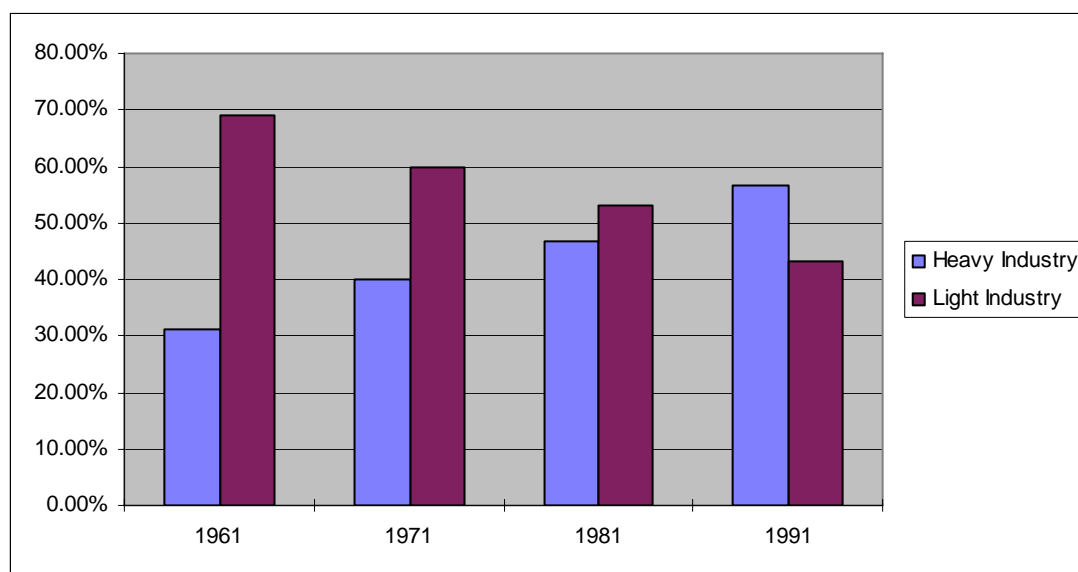
fiscal and monetary policies, tax reform, a uniform and realistic exchange rate, liberalized exchange control, efficient public utility management, an efficient banking system, and the sale of public enterprises to the private sector.

However, the evidence does not match the story of a sharp policy break. For example, it is not clear that Taiwan dramatically reduced its import controls from the early 1960s; in fact, they simply became highly selective. As Wade (1988: 139) explains, 'Taiwan's tariff structure is minutely differentiated by product, with tariffs ranging from zero to well over 100 per cent'. Stephen Haggard (1990: 94-5) notes: '[e]ven neoclassical accounts of the country's growth express reservations about the extent of import liberalization. The tariff system coupled high rates with various offsetting packages'. A number of Taiwan scholars went further to argue that the ISI strategy as a whole was pursued in parallel to the EOI strategy from the early 1960s, and export promotion was essentially supplementary to ISI (Hsing 1993, Ma 1994, Ch'en 1994).

A review of policy over the 1960s supports this observation. In *An Introduction to Our Economic Development Strategy* (1987: 147), Li and Ch'en clearly state that between 1961 and 1972 the aim of industrial development strategy was to continue pushing the development of import-substituting industries, and in particular to give more support to the development of heavy and chemical industries. In the 1960s, the first two four-year economic plans (1961-68) emphasized the need to develop heavy and chemical industries. The first plan (1961-64) stated that '[h]eavy industry holds the key to industrialization as it produces capital goods. We must develop heavy industry so as to support the long-term steady growth of the economy' (Wade 1990: 87). The second plan (1965-68) noted that '[f]or further development, stress must be laid on basic heavy industries (such as chemical wood pulp, petrochemical intermediates, and large-scale integrated steel production) instead of end product manufacturing or processing' (Wade 1990: 87). Clearly, not only did Taiwan continue ISI in the 1960s but also went further to enter the secondary phase of ISI by developing heavy and chemical industries.

Actual growth trend and figures of heavy and chemical industries in the 1960s reflect both the continuation of ISI and further switch to a secondary ISI. A Japanese economist Takeji Sasaki (1992: 30) shows that the increase in the growth rate of heavy and chemical industries in the period from 1961 to 1968 was the highest of any period between 1950 and 1985, and argues that in Taiwan the transformation from developing domestic markets to exploring external markets and the transformation from developing light industries to assisting heavy and chemical industries took place not in sequence, but at the same time. Figure 1 shows the weight of heavy industry in Taiwan's manufacturing sector increased 9 per cent from 1961 to 1971. This is a higher increase than in the following ten years, when secondary ISI is conventionally believed to have taken place.

Figure 1: Relative weight of heavy industry and light industry in manufacturing production in Taiwan, 1961-91



Source: Hisao (1994: 35).

This point is crucial if we are to understand Taiwan's industrial development as a whole. The conventional view focuses on export promotion because secondary ISI is thought to have taken place after EOI of the 1960s. However, if the development of heavy and chemical industries actually took place ten years earlier, then both ISI and EOI strategies laid a solid foundation for further industrial growth in Taiwan. Chu (1995: 62) argues that people trying to prove the superiority of EOI use Taiwan as an example but often ignore the continuation and the role of ISI strategy in Taiwan's economic growth after the 1950s. This prevents their readers from fully understanding Taiwan's economic policy and economic growth. Wade (1993: 162) states, '[i]n Taiwan and South Korea, however, the continuity of policy is as striking as the change, including the 1958-62 "liberalization" in Taiwan and the 1962-65 "liberalization" in South Korea'.

If the conventional description of the policy shift of the 1960s is problematic, its explanations fare no better. As discussed earlier, those efforts focus on economic necessity and American influence. However, a close examination of Taiwan's situation makes it clear that such explanations are both problematic and incomplete. The argument that there was an excess supply of domestic goods is often overstated. Hsiao (1997: 65) argues that while the prices of some domestic products dropped between 1957 and 1958, the annual rate of reduction for most goods was within 5 per cent. Furthermore, prices for some goods, such as textiles, did not decrease in 1957 or 1958. Hsiao notes that the price reductions could be related to a general recession in world markets around 1957, since some of the domestically produced goods were exported (though in small amounts).

The argument of American influence also weakens under close examination. The key piece of evidence for American influence is Haraldson's eight-point programme of 1959. However, Li Kuo-ting, a key technocrat at the time, points out in his reminiscence (Wang 1993: 119) that Haraldson's eight points were concerned with economic

liberalization, but none of them emphasized export promotion. In fact, although the government took most suggestions of the eight-point programme, many have still not been effectively carried out (Wang 1993: 141, Hsing 1993: 78). What happened in the end was almost the opposite to the eight-point program; its suggestions were not put into effect and what it did not emphasize – export promotion – has been consistently enforced since the early 1960s, but why?

### **Explaining policy change and continuity**

An explanation of both change and continuity in Taiwan's economic decision-making begins with the basic need of ISI. In order to substitute imports with domestic products, ISI requires foreign exchange to buy technology and equipment (i.e. intermediate and capital goods). In the 1950s, having difficulty raising revenue domestically, the Taiwan government relied on US aid to finance ISI. (US economic aid to Taiwan constituted 40 per cent of its total investment in the 1950s.) However, after a re-examination of its global aid policy, the US government in 1959 hinted that it would soon cut economic aid to Taiwan (Li and Ch'en 1987: 137). Even with massive aid, the Taiwan government was running budget and balance of payments deficits. The termination of the aid would make the situation much worse. In fact, it can be argued that without US aid, Taiwan could never have successfully pursued ISI.

Hsiao Ch'uan-cheng (1997: 65) argues that the real direct reason for the policy change (in the early 1960s) is that the Taiwan government anticipated a possible reduction in US aid and therefore a possible increase in balance of payment pressure, after the US government re-examined its global aid policy in 1957. This is confirmed by Wei Yung-ning, who as an economic bureaucrat personally experienced the policy shift in the early 1960s, in his reminiscences (1994: 93). But given Taiwan's small market size, why did it want to keep the expensive ISI; why not completely switch to EOI?

The extra push for keeping ISI and EOI together came from Taiwan's security concern. The military threat from mainland China to Taiwan was consistently between the late 1940s and the late 1970s. Facing a consistent threat, the government had to build an economy that would strengthen their defence capacity in the long-term. Not any kind of economy would do; it must be one capable of sustaining a strong and autonomous defence industry. As an independent defence industry requires an independent economy, Taiwan had to develop heavy and chemical industries. Thus, from the early 1960s, the plan for economic independence called for independence from US aid and kept the focus on heavy and chemical industrialization.

There was no way that EOI could produce an immediate growth of heavy and chemical industries when the exports of the 1960s were basically primary labour-intensive products.<sup>1</sup> Although export promotion gradually replaced US aid as a source of foreign exchange, such EOI could not support economic independence. Independence required ISI, but with a focus on secondary ISI promoting heavy and chemical industrialization.

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<sup>1</sup> It is argued that Taiwan's heavy industrialization was the result of the demand of a rapidly expanding export sector for intermediate and capital goods in the late 1960s (Ch'en 1994). This may be very true in pure economic theory, but it is certainly not what really happened. The Taiwan government pushed for heavy industrialization since the early 1960s, about the same time as the beginning of EOI.

This was the precise course the Taiwan government followed from the early 1960s, resulting in the rapid growth of heavy and chemical industries during the 1960s, as Figure 1 shows.

In fact, EOI and ISI strategies worked hand in hand in the 1960s and 1970s. While exports provided foreign exchange to import-substituting industries, those industries developed Taiwan's economic independence. Thus both policy change and continuity were simultaneously promoted by the desire for economic independence. On the one hand that desire favored continuity of ISI through the 1970s, and on the other hand it shifted the focus from economic stability and wartime preparation (primary ISI) to long-term defence capacity (secondary ISI). In the early 1970s, the weakening of the US commitment to East Asian security, Taiwan's loss of its seat in the United Nations (UN), and Nixon's visit to Beijing further strengthened the Taiwan government's determination to seek economic independence. In 1973, Premier Chiang Ching-kuo announced ten big development projects, including several major public infrastructure projects and industrial projects to construct steel, petrochemical, and shipbuilding plants.<sup>2</sup>

As a response to the changing security environment, '[t]he decision to allocate investment resources to the development of defense industries in the early 1970s formed a central part of overall industrial strategy' (Nolan 1986: 110). In order to establish a solid base for the defence sector, the government on the one hand promoted the development of infrastructural facilities such as roads and highways, and on the other hand enhanced the development of heavy and chemical industries. Despite a small domestic market and a lack of comparative advantage in the capital-intensive industries, the Taiwan government pushed its defence-related industrial strategy and used public enterprises to lead the way in developing those industries.

The government, banking sector and public enterprises were the key institutions supporting Taiwan's ISI. Taiwan has one of the largest public sectors in the non-communist world. From 1952 to 1995, state capital consistently amounted to around 45 per cent of gross national capital formation (CEPD 1996: 47). Up to 1990, public enterprises contributed 10 to 25 per cent of total government revenues (Wu 1992: 7). During Taiwan's high growth period (in the 1960s and 1970s), the growth of public enterprises exceeded that of the whole economy. It should be especially noted that large public enterprises exceeded large private ones in size. According to Wade (1990: 178), '[i]n 1980 the six biggest industrial public enterprises had sales equal to the fifty biggest private industrial concerns. Of the ten largest industrial enterprises seven are public enterprises; of the largest fifty, nineteen are public enterprises'. In 1981, 98 per cent of the enterprises in Taiwan were privately owned enterprises that each employed fewer than 50 employees (Chen 1995: 86).

The importance of state capital was not only a matter of size. The state also controlled the vital parts of Taiwan's economy. State capital monopolized the electricity, gas, water, railway and telephone utilities. It also controlled strategic or 'upstream'

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<sup>2</sup> Some people believe that the ten projects were a response to the first oil crisis. However, that argument is rejected by former policymakers such as Li Kuo-ting and Yeh Wan-an (Wang 1993: 216, Yeh and Ch'iu 1985: 193), since many of the projects, especially the industrial projects, were already endorsed or planned in the late 1960s.



industries, like petroleum refining, petrochemicals, steel and other basic metals, shipbuilding, heavy machinery, transport equipment and fertilizer. According to Liu and Huang (1993: 47), in the 1980s state capital comprised 90 per cent of the energy industry, 80 per cent of metals, 95 per cent of petrochemicals and 80 per cent of shipbuilding. Within each of those industries, public enterprises always dominated. For example, in the steel industry, China Steel was under direct control of the Ministry of Economic Affairs and had several thousands satellite factories. Private business and especially the small and medium enterprises tended to be located in downstream industries. Taiwan, thus, had a distinct industrial structure in which public enterprises dominated the upstream of production processes, while most private businesses occupied the downstream of production process.

The government in Taiwan had almost complete control over the banking sector before the 1980s. 'The four private banks had only five percent of deposits and branches of all the commercial banks in 1980, and the biggest of the four is only nominally private' (Wade 1990: 161). Since the 1960s, financial institutions were also influenced by the capital accumulated by the ruling party (Ch'en and Chang 1991: 12). So, the banking sector in Taiwan was under double control – by the government and by the ruling party. Industrial policies in Taiwan were carried out through the allocation of financial resources by the government. The focus of credit allocation was on public enterprises in Taiwan. This should not be surprising since, as mentioned earlier, public enterprises were the main vehicle for government industrial policy. Wu (1992: 141) notes that between 1965 and 1975, among 32 enterprises receiving direct investment from Taiwan's largest bank (the Taiwan Bank), 19 were public enterprises. The most important bodies of the government involved in industrial policy-making had little contact with the private sector, and the industrial plans they made were basically public sector plans requiring 'little knowledge of the intentions of the private sector, not even investment intentions' (Wade 1990: 277).

The government bureaucracy is also a subject of study (Tung 1996, Cheng et al. 1998, Evans 1998). Although the key economic institution or often called the 'pilot agency', which makes and implements economic decisions, took various names and even forms over the years<sup>3</sup>, the key personnel were always there. The KMT leaders also made the pilot agency independent from the rest of the bureaucracy, and its power of policy making and implementing was therefore enhanced (Cheng et al. 1998). The pilot agency linked the banking sector and public enterprises, and played the key role in promoting Taiwan's industrial development.

It should be noted that, public enterprises, the banks and the bureaucracy are institutions as well as organizations and even political actors. To emphasize their institutional features is to understand the ways they operated and the ways they were linked together. The government, in particular the pilot bureaucracy, is clearly at the center of the connection. Given the socialist orientation in the KMT's founding economic thought, the pilot bureaucracy favored public enterprises as the key instrument in promoting industrial development. The government also directed the financial resources from the

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<sup>3</sup> The pilot agency changed from the Economic Stabilization Board established in 1953 to the Council for US Aid in 1958, to International Economic Cooperation and Development in 1963, and to the Council for Economic Planning and Development in 1977. In addition, the Industrial Development Bureau established in 1970 under the Ministry of Economic Affairs is also a key economic agency.

banking sector to public enterprises. The experience of hyper-inflation in the last few years of the KMT's rule over the mainland made Taiwan's banking sector conservative about the money it lend out.<sup>4</sup> Thus, the key institutional features of the KMT state in the 1960s and 1970s are the linkages between the government, public enterprises and the banking sector, where the government was at the center of the linkages, the public enterprises as the key instruments of government's industrial policy dominated the upstream of the production process, and supported by a conservative banking sector.

## **ISI in China's policy transition**

### **The origin of the combined strategy of ISI and EOI**

The nature of the transformation of China's development strategy in the early 1980s is no less controversial than Taiwan's in the early 1960s. The conventional view introduced early in this study is often used to describe China's transition, that is, China made the switch from ISI to EOI in the late 1970s and early 1980s. China is seen following the footsteps of Taiwan – between the 1950s and 1970s China was engaged in ISI (just like Taiwan in the 1950s), and from the early 1980s China's development strategy changed to EOI (just like Taiwan from the early 1960s). Some scholar further argues that China's open-door policy was induced by international markets forces (Moore 1996 and 2002). This study argues that like Taiwan's policy transition in the early 1960s, China's policy transition was also borne out of a moment of crisis with ISI and the solution was not to give up ISI strategy but to combine it with an EOI strategy.

The problem began with China's adoption of extreme ISI strategy in the 1950s. Unlike Taiwan where even in the height of its ISI private sector was still a significant part of the economy, in China ISI was the key part of central planning system copied from the Soviet model, which makes normal ISI measures all become extreme – instead of infant industry protection, it protects all industries; instead of putting tariffs on the imports similar to what the infant industries produce, it puts tariffs on all imports. The key difference though, concerns how the ISI is financed. In the Soviet model, agricultural production was collectivized in order to transfer all surplus to industry, and nationalization of all industries and banks made sure that the government could re-invest all possible resources into industrial development. Thus, the extreme ISI aims at achieving the goal of rapid industrial growth by mobilizing all domestic resources rather than relying on foreign assistance, which clearly reflected the international isolation and the urge for quick industrialization the Soviets had in the 1930s. Ironically, it did not take long for China to enter a similar situation. After the 1950s during which the Soviet Union supported China's ISI, China was isolated and had no support from either the Soviet nor American camps in the 1960s and much of the 1970s.

Although the extreme ISI created an industrial foundation for China's modernization, it alone clearly had its limitations. First, China seriously lacked modern technology and

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<sup>4</sup> The autonomy of the central bank was further strengthened by its institutional linkages with the bank community, the Ministry of Finance and the planning agency, and the KMT party organization (Zhang 2005).

equipment. Taiwan's ISI in the 1950s was supported by the US with relatively advanced technology and equipment, while China's extreme ISI was founded on domestic resources. Thus, '[a]n ISI could not be effective simply because there was no hard currency to buy the goods which were so urgently needed by China to produce import products' (Li and Vinten 1997: 188). Second, in order to mobilize all available resources the extreme ISI had to suppress domestic consumption, which in the long run damaged people's incentive to work, and the incentive problem was also worsened by political turmoil during the Cultural Revolution between 1966 and 1976.

From retrospective, solution to these two problems seems obvious. By promoting exports, foreign exchange can be earned to pay for the imported technology and equipment, and at the same time the suppression over domestic consumption can be lifted (at least to certain extent) which would provide people with more incentive to work. However, the extreme ISI had been on-going in China for three decades, and the old institutions of the Soviet model had become a way of life and had also created special interests to support it (the extreme ISI has survived in North Korea until today). It is difficult to change without a major crisis which could make people open to alternative thinking in the process of searching for solutions.

For Taiwan, the crisis was the withdrawal of the US aid; for China, it was the campaign of so-called 'leap forward by foreign means' (*yang yue jin*). In 1976 Mao passed away and the new leadership under Hua Guofeng effectively ended the Cultural Revolution by putting extreme leftists (the 'gang of four') into jail. The welcome political change temporarily pushed up economic growth, in 1977 and 1978 total output of agricultural and industrial production grew at 11.5 per cent annually and government revenue increased 44 per cent (Jin 1990: 140). Hua went on to campaign for even higher growth rate and advocated for a 'new leap forward in national economy'. The Ten Year Plan made in 1978 called for the construction and completion of 120 large development projects, including ten large iron and steel establishments, ten large oil fields, eight large coal establishments, six new rail roads, five large ports, and 30 large electricity stations (Gao 1993: 91). In order to meet the targets, investment in basic construction grew at 50 per cent in 1978, number of heavy truck imported also at 50 per cent, and steel materials at 64 per cent (Gao 1993: 92).

With those large investments and imports, finance became a key problem. Oil sale was the main way for China to earn foreign exchange in the 1970s. However, towards the late 1970s new oil fields were hardly found, and worse, a rapid expansion of petroleum output even damaged the long-term productivity of the existing fields, as Naughton (1996: 73) puts it, '[b]y the end of 1978, China's planners faced the uncomfortable reality that the most successful element of their pre-1978 industrialization drive – and the crucial centerpiece of their plan to accelerate industrialization – was in ruins'. Since the government was unable to fund those large development projects with foreign exchange earned from oil sale, it had to borrow large amount of foreign debt, which is why Hua's campaign for rapid growth is often called 'leap forward by foreign means'. The direct result was the largest balance of payment deficit since the People's Republic of China was founded in 1949 (Jin 1990: 141, Gao 1993: 93). Large investment also crossed out domestic consumption and therefore delayed people's welfare improvement. By 1980, the government had to put the whole plan on hold. Some scholar regards the failure of the 'leap forward by foreign means' as the third largest economic disaster next to the Great Leap Forward and the Cultural Revolution (Jin 1990).

The economic crisis created an opportunity for reformers like Deng Xiaoping and Chen Yun to step into the process of economic decision making and to change economic strategy, which led to the open-door policy in the early 1980s. However, it is wrong to assume that EOI replaced ISI. Far from it, the open-door policy was born at a particular point of time to deal with the problem of extreme ISI. As discussed early, extreme ISI has key problems of lack of modern technology and equipment and disincentive for people to work. The 'leap forward by foreign means' attempted to solve the first problem by importing modern technology and equipment, only to generate the balance of payment disaster. Thus, China in late 1970s encountered a similar problem that Taiwan did in the early 1960s, that is, the problem of financing ISI with foreign exchange, and their solutions were the same, that is, promoting exports in order to continue ISI.

Li and Vinten (1997: 188) argue that 'ISI was vital in order to create the preconditions for a switch to EOI, and without abandoning ISI strategy, China is much closer to integration of the two strategies'. Other scholars go further to argue that China had a combined strategy all the way from the early 1980s (Long 2004, Dutta 2005). Concerning the rationale of export promoting, Sen (2001: 3) notes that '[e]xports were identified as the principal method for acquiring foreign exchange for the modernization of China's economy'. From the government side, Vice-Premier Li Peng argued in 1987 that the open-door policy – learning advanced technology and management experience from the West and obtaining foreign investment – is an important supplement to China's socialist development, and export expansion, export structure improvement and foreign exchange earning are the key issues in China's foreign economic operations (Zhang et al. 1992: 152). Clearly, the open-door policy was to play a supplementary role to industrial development. Li and An (2004: 381) summarized eight major industrial policy measures used by the government to promote industrial development up to the late 1990s, including central government financing and planning, empowerment of key industries with direct financing, preferential interest and tax rates and favorable financing for target industries, infant industry (trade) protection, pricing policies, administrative means, channeling FDI into desired industries by exercising control over licensing and the approval of investment projects, and various restrictions imposed on foreign ownership and the geographic scope of foreign-funded enterprises.

Up to the mid-1990s, average tariff rate was 43 per cent (McKibbin and Tang 1998: 6). In the mid 1980s, parallel to its effort to promote EOI, the government introduced more import tariffs aiming at inducing domestic firms to buy the products of import-substituting industries. Kueh (1990) argues that during the 1980s the established priority of promoting industrial growth through heavy industry was very much intact. Kueh stated that 'heavy industrial output in the past decade or so has actually never been scaled down significantly in favour of agriculture and light industry for purposes of increasing consumers'. The output share of heavy industry was around 52 per cent of total national industrial output, only marginally lower than its share of 57 per cent in 1978; and expenditure on capital construction for heavy industry as against light industry and agriculture was 45 per cent of the national total, also marginally lower than 49 per cent in 1978 (Kueh 1990: 110). The seventh Five Year Plan (covering 1986-90) aimed to raise the output share of light industry against heavy industry and agriculture from 38 per cent in 1985 to 39.4 percent in 1990 while for heavy industry from 38.1 per cent to 39.6 per cent (CCP documents research centre 1986: 987).

Although exports and light industry as the main parts of EOI have been the target for government support since the early 1980s, the above discussion shows that the government continued to promote ISI by maintaining and even raising tariffs and by supporting heavy industry; this was particularly true in the 1980s. Moreover, EOI has become a key means for China to solve the main problems of ISI, that is, exports to earn foreign exchange and to free up ISI suppression of domestic consumption and light industry to produce consumer goods.

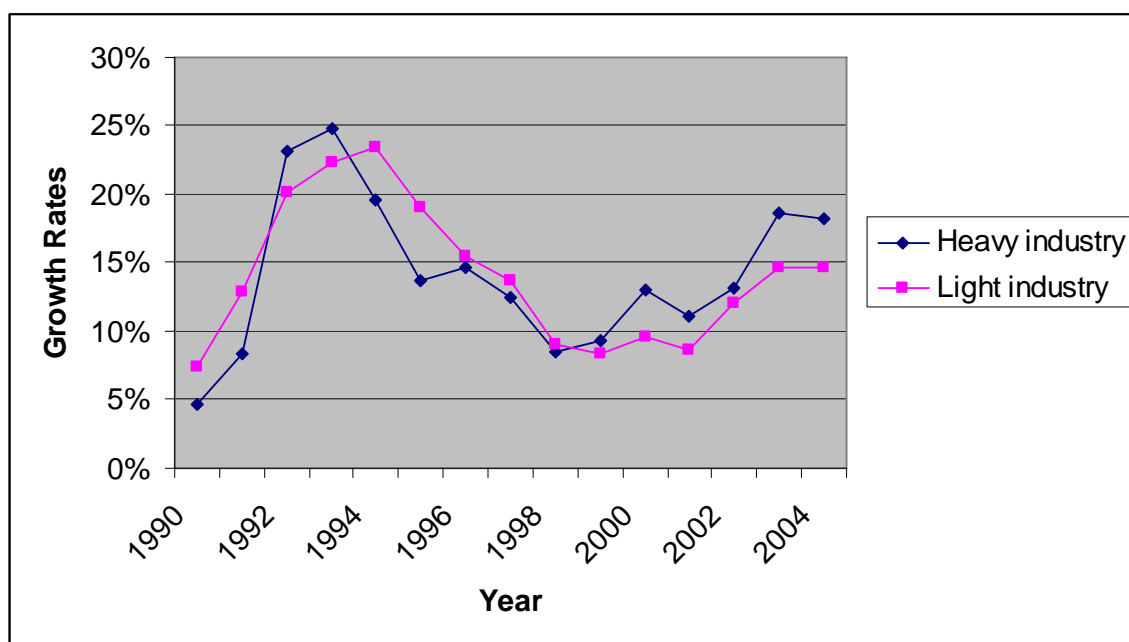
### **New challenge and institutional change**

The situation related to ISI has become complicated since the early 1990s. China's preparation for and eventual accession to World Trade Organization meant that a few traditional measures associated with ISI have to be abandoned or reduced in significance, including the abolishment of import quotas and license and reduction of import tariff. However, the Chinese government has been mobilizing various means, old and new, to protect and support the import-substituting industries – those capital- and technology-intensive ones.

Officially, the average tariff has been reduced from 43 per cent to under 20 per cent in the 1990s, but according to some foreign exporters, the real tariff was still close to 40 per cent since local governments could exempt domestic products from value added tax, which was always levied on imports (Breslin 1999: 1188). The government also has an active industrial policy to support strategic sectors. For example, by manipulating standard setting in video compact disc and digital video disc industries, the government has been consistently making effort to reduce royalty payments to overseas patent holders and therefore to help leading Chinese firms to secure technological leverage (Linden 2004). By innovating and re-innovating domestic legal treatment of state-owned enterprises (SOEs), foreign and domestic private firms, the government was believed to give the most favorable treatment to SOEs, which are the foundation of capital-intensive industry, in particular the government has been channeling foreign capital to set up joint ventures with SOEs, which made some scholar believe that China is using foreign capital to preserve, not to dismantle socialism (Huang 2003: 407-9). Steinfeld (2004: 1980) notes that '[w]hat makes Chinese industrial policy so difficult to comprehend, though, is that for all its focus on market-based approaches and comparative advantage, it also happens to have an entirely different side, one that embodies assumptions of heavily statist Japanese and South Korean models of the past'.

In his study of capital investment, international trade and economic growth of China, Yu (1998: 76) observed that in the 1980s labour-intensive industry expanded more rapidly than the capital-intensive one, but in the 1990s, the situation reversed, the capital-intensive industry became faster due to large scale investments. Figure 2 shows that in terms of output growth light industry and heavy industry were neck in neck in the 1990s with the former slightly ahead, but the trend after 1998 points to a stronger growth of heavy industry.

Figure 2: Growth of heavy and light industries in China, 1990-2004



Source: NBS (1991-9) and NBS (2000-5).

Like Taiwan in the 1960s and 1970s, China's combined strategy of ISI and EOI in the 1980s and 1990s had a strong institutional support. As in Taiwan, the government, the banking sector and SOEs are the major institutions behind ISI in China. The government controls the banking sector, which provides investments to SOEs. What is different from Taiwan is that in China SOEs plays a larger role in the economy. Between 1978 and 1992, the state sectors received about 80 per cent of bank credits (Yu 1998: 74). Industrial sales of large SOEs on average accounted for more than 40 per cent of national totals between 1994 and 1998, and in terms of industrial assets and industrial profits the shares of national totals for SOEs were 50 and 60 per cent during the period (Lan and Cao 2000: 49). SOEs have been the key part of China's ISI since large SOEs dominates capital-intensive industry. Given the dominant role of SOEs in China's economy, the government has been engaging in enterprise reform ever since the beginning of the reform – creating spaces for foreign, collectively-owned and private firms to play greater role in EOI while strengthening and reforming SOEs to led ISI. The reform became more urgent when about half of SOEs encountered the problem of non-performing loans in the 1990s.

The solutions are privatization and corporatization with the emphasis of the latter. Between 1994 and 2000, almost 60,000 small to medium-sized SOEs were liquidated, privatized or transferred to employee ownership (Steinfeld 2004: 180). About the same time, the government organized large SOEs into large enterprise groups in order to enhance their international competitiveness based on their economies of scale. This is the strategy of so called 'grasping the large while letting go of the small' (*zhuada fangxiao*), which aims at letting the market take over the small, medium and usually more inefficient SOEs while focusing on government's effort to support large SOEs.

Between 1991 and 1997 the number of enterprise groups increased from 55 to 120, and between 1996 and 1999 the number of enterprises selected as key enterprises to be

supported by the government increased from 300 to 520 (Nolan and Rui: 2004: 97). The re-organization goes well into the twenty-first century and across sectors. Over 120 car manufacturers are to be organized to three large conglomerates, over 300 electricity suppliers are being organized into five generation and two transmission groups. There are also plans to organize three gigantic media groups. The oil industry and airlines have already been or is being restructured into a few conglomerates (Chung 2003: 61).

It is important to note that the strategy of *zhuada fangxiao* is the one of picking the winners. Large SOEs selected are often the best performer among SOEs. The profit rates of large and medium enterprises, among which SOEs and SOE based joint ventures are the main part, have been consistently higher than SOEs as whole from 1985 to 1997 (Smyth 2000: 726). In 2000, the profits of the 515 key state enterprises accounted for 98 per cent of total SOEs profits, and in 2002 the profits of the 510 key state enterprises accounted for 104 per cent (Nolan and Rui 2004: 98). To support those key state enterprises and enterprise groups, the government employed various measures, in particular the support of the banking sector. The government has been trying to organize the banking sector around selected key SOEs and enterprise groups. For example, in 1996 a banking and enterprise cooperation agreement was signed between a major bank and 279 key enterprises (Smyth 2000: 722). Nolan and Rui (2004: 98-8) summarized government's measures to support key state enterprises and enterprise groups as the following:

extensive support from the banking sector; shelter from international competition behind a wall of protective tariff and non-tariff barriers; an independent accounting system, which removed the barriers between different sectors, departments and regions; permission for the establishment of internal group finance companies; the granting of import and export rights; rights to establish international joint ventures, and rights to float a share of equity on national and international stock markets.

In the 1990s, the government also engaged in internal re-organization, and one of its objectives was to help re-organization of SOEs. In 1993 the State Economic and Trade Commission (SETC) was established to modernize the technology and management of SOEs. In 1998, another round of re-organization abolished almost all industrial ministries and associations, and made them state bureaus under SETC, which effectively created a super economic ministry like the Ministry of International Trade and Industry in Japan and Economic Planning Board in South Korea. In 2003, SETC was transformed into State Assets Commission and continue to supervise the management of SOEs. At the same time, another long standing and key economic institution, the State Development and Planning Commission was renamed into State Development and Reform Commission, continuing its role in planning and guiding China's development in general and SOE's development in particular.

As a result of government and SOE re-organization, the foundation of ISI in China in the 1990s is more like that in Taiwan in the 1970s, that is, SOE based enterprise groups control the upstream of production processes, which basically consist of petrochemical and heavy industries (Nolan and Wang 1999), and the banking sector is organized to support those groups, while in the downstream of production processes, privatized small and medium SOEs together with other private firms, collectively-owned firms, and foreign-owned business play the dominant role.

## Conclusion

ISI and EOI are both present in Taiwan and China during the eras of their economic success. EOI in both cases began as a means to sustain ISI, which has been the development focus throughout the eras of their economic success. The government, the banking sector and public enterprises are all the key institutions supporting ISI in Taiwan and China, and even the way in which those key institutions are linked is similar between the two cases. This is not to say there are no major differences between Taiwan and China. Market size is a big issue we discussed earlier. Also, China is now facing an uncertain central-local relation domestically and the challenge of globalization internationally, while Taiwan had none of them 30 to 40 years ago. However, given those significant differences, this study still found a parallel experience between Taiwan and China in terms of development strategy and institutions across time.

One could argue, however, that EOI created the economic miracles in Taiwan and China despite a strong presence of the ISI drive, in other words, the economic success could have been greater without the ISI drive. Perhaps the difference between Taiwan and the Southeast Asian tigers can provide part of the answer to this question. Taiwan's economic success is not so much in selling more goods to the world, but to build a solid industrial base for further development, while lack of a solid industrial base was one of the key problems, which led to the fall of Southeast Asian economies during the Asian financial crisis of 1997. ISI is the key to industrial upgrading as the Taiwan experience shows and which is exactly what Southeast Asian countries have not done or not done enough. Now it is China's turn to show the power of combining ISI and EOI.

This study has both theoretical and practical implications. The argument here speaks well to the developmental-state literature. It shows that the state has been the key to economic success of both Taiwan and China. Peter Evans (1995) used the concept of embedded autonomy to explain the successful industrial transformation of Japan, South Korea and Taiwan. He argued that those developmental states not only had autonomy in terms of economic decision making, but were also embedded in society, which made the policy implementation process a smooth and successful one. However, Evans did make a special note of Taiwan's situation by arguing that compared with Japan and South Korea, the KMT state had a less extensive policy network linking private business, and it compensated the weakness by developing networks between public enterprises and private business (Evans 1995: 56). The existence of a large public sector and its relation to the government were clearly the main reason for the KMT state to rely less on the private sector when it implemented its policies. Compared with Taiwan, China should have more of this problem, given an even larger public sector and much smaller and insignificant private sector. For now, the Chinese state can get around the problem by exercising its direct control over SOEs and its indirect control over collectively-owned firms, since they together still represent the main part of China's industrial economy. However, as the reform continues, the private sector will become larger and stronger. How much embedded autonomy the Chinese state will obtain is an important challenge, which lies ahead.

What can other developing areas learn from Taiwan and China? Obviously, given different international and domestic situations, it is impossible for others to copy the development strategies and institutions of Taiwan and China. But bearing in mind that Taiwan and China are also very different, yet they shared many similarities in their development paths. Other places can learn from them, if not the whole, at least from



parts of their development strategies and institutions. First of all, a region must build its own industrial capacity, and the most direct way of doing this is to engage in ISI. Second, to emphasize ISI is not to overlook the importance of the market, but one has to realize from the Taiwan and China experiences that, export promotion should have a clear aim of supporting ISI. Thus, this study advocates a combined strategy of ISI and EOI. Finally, the government has to have some key instruments in building its industrial capacity. They do not have to be SOEs or/and state-owned banks, but the government has to have a stable influence over key strategic industries and the financial resources, which can be directed to those industries.

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