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Transborder Industrialization and Singapore's Suzhou 'Experiment': A Paradox of Context?

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Presentation

TRANSBORDER INDUSTRIALIZATION & SINGAPORE'S SUZHOU 'EXPERIMENT': A PARADOX OF CONTEXT?[1]

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Abstract

This paper revisits Singapore's much publicized, and controversial, transborder industrialization projects in China, viz, the Suzhou Industrial Park. The strategic initiative, premised on Singapore's positive reputation in infrastructure management and corruption-free administration, was proffered as a 'model' for future projects in China, and the region. Our paper contends that a paradox of context has dogged the Suzhou 'experiments', and the intended 'cloning' of the Singapore industrial development model, beyond demarcated national boundaries, is a much more complex and challenging process.

Key words: Transborder industrialization – Singapore – Suzhou, China.

Introduction

"Going regional is, therefore, about investing our expertise and capabilities in other growth areas in the region, interlocking them with our domestic economy. It is to strengthen our domestic economy, expand our national economic zone, and ratchet up our standard of living. This is the mission of our regionalization drive."

- Goh Chok Tong (Singapore Forum Proceedings, 1993)

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"In January 1993, Prime Minister Goh Chok Tong announced Singapore's regionalization drive. We have made good progress. Singapore's trade grew by an average of 6.3% a year, from S$257 billion in 1993 to an expected S$470 billion last year. Singapore's direct investment overseas grew by an average of 22% from 1993 to 2001."

- George Yeo (International Enterprise Forum, 2004)

This 1993 landmark speech by Singapore's former Prime Minister Goh enunciated the new focus in Singapore's economic development. Ten years on, as Singapore's Minister for Trade and Industry, George Yeo, noted in his speech, the general effect of the regionalization drive on Singapore's trade figures were indeed positive. However, several of the initiatives under this regionalization drive have had unexpected and mixed results – most notably in the development of overseas industrial parks, in co-operation with foreign governments. The intention of this main initiative was obvious – to create 'special' investment zones in the region in which Singaporean and Singapore-based manufacturers would enjoy privileges concordant with Singapore's partnership in the development of the investment zones, and, to a certain extent, this it succeeded in. However, as will be discussed below, unforeseen circumstances exposed these 'industrial parks' to a number of unexpected difficulties and dependencies.

The concept of entering into partnerships with foreign companies has long been a central point in Singapore economic policy, with the government having offered a number of investment incentives to attract foreign multinational companies (MNCs) ever since the mid-1960s. However, by the mid-1980s, a combination of rising domestic labor costs and increasing economic development leading to greater competition in the region created a necessity for Singapore to shift away from a labor-intensive paradigm to one more focused on quality and service; one that produced more 'value-added' activities, so as to maintain its technological edge and regional hub status. Along with this came a greater need to access foreign markets and their latest technologies, which the Singapore government attempted to accomplish in 1988 with an overseas investment program (Singapore Economic Development Board, 1988, 1990) that sought to encourage Singapore-based firms to enter into joint ventures and partnerships with foreign firms, especially those in Europe and North America (Caplen and Ng, 1990; Wong and Ng, 1991). The majority, however, of these investments achieved little in terms of opening up either markets or technology, and instead produced immense accumulated losses even before the early 1990s (Balakrishnan, 1991; Kanai, 1993). Clearly a reformulation of strategy was required; and the new strategy embraced by the Singapore government focused instead on expansion within Asia, interest in the region having been fueled by explosive growth in the economies of several countries (notably Indonesia and China) following the relaxation of foreign investment controls (Regnier, 1993; Pang 1995; Kraar, 1996; Kwok, 1996; Okposin, 1999; Pereira, 2001, 2003; Blomqvist, 2002; Sitathan 2002;).

The main thrust of Singapore's new regionalization strategy involved the establishment of industrial township projects – or, as they are now more commonly known, 'industrial parks' – in China, India and several Southeast Asian countries, and the offering of a wide range of regulatory and monetary incentives to assist Singapore firms and individuals to move into overseas markets. This was to aid in the transition of Singapore into a 'total business centre' – low-value manufacturing moving out to other countries, while the domestic economy restructured itself into one focused on high-value manufacturing and regional co-operation with both foreign and local MNCs. The 'industrial township' model was of especial interest because it allowed government-linked companies, or GLCs, to take a direct role in the regionalization drive; too, the infrastructure required in the building of such a township offered opportunities for small-scale operators and service providers, such as clinics and small-scale contractors, to play a role in the development of these townships (Tan, 1995). Co-operation with the host governments would also lay the groundwork for greater economic collaboration in the future. Singapore's selling point to these host governments was simple – to quote Dr Richard Hu, "Singapore's skilled workforce, good contract laws, and transparent business practices", or perhaps more accurately, the country's reputation for the above. More than money or expertise, the Singapore brand name was to be the country's other main contribution.

This, it seemed, proved to be the case when Chinese premier Deng Xiaoping, in a visit to Singapore, extended an open invitation to Singapore to look into developing a model industrial township in China, to test the efficacy of Singapore business methods in a Chinese environment. Premier Deng aimed to not only deepen China's economic relationship with Singapore, but to also provide a test environment through which his countrymen could learn from Singapore's business and management practices, as well as from Singapore's foundation of good urban planning, social security systems, etc. To Singapore's policy makers, this was only confirmation of the marketability of the Singapore brand name, and the project soon had their full support. The final selling point for this project, which would come to be known as the Suzhou Industrial Park, was the perception that Singapore and China shared a common cultural heritage, and a strong sense of kinship between its citizens; as will be discussed, however, the social and political attitudes of the two peoples proved to be rather less common than might have been initially thought.

The Suzhou 'experiment' has been examined from various perspectives; including politics (Yang 1997), economic geography (Yeung, 1998; Perry and Yeoh, 2000), business (Tan and Low, 1996; Wong and Goldblum, 2000), international relations (Lee, L.T. 2001) and more recently, from sociology (Pereira, 2003). This paper seeks to contribute to the current discussions by providing insights at the firm level, through the perspectives of investors in SIP.

Analytical Framework

The Suzhou experiment will be examined in the context of Porter's value chain analysis, which takes a firm-central perspective. Porter's theory suggests that a firm's success in any given location is dependent on a conglomeration of myriad factors relating to the many individual activities of the firm, and including such factors as demand conditions and the presence of related and supporting industries. It therefore suggests, among other things, that the production process should be viewed as a value chain (Porter, 1986, 1994, 1996), and that also, firms should select a location with comparative or location-specific advantages that will serve to complement the competitive advantage they enjoy as a result of being placed higher up in the value chain. It further postulates that, considering the increasing pace of globalization, it is also necessary to alter location-specific advantages in accordance with the integration of rapidly changing global economic activities and the increasing influence of governments and regional authorities over the sphere of business activities in the region. This is necessary to create a synergistic advantage through the strategic alignment of the competitive and comparative advantages of any given region. The degree to which this alignment may have or have not been accomplished in the Suzhou Industrial Park will be considered.

Suzhou Industrial Park

The Chinese leaders looked to Singapore as a successful development model that had substantial reference values, as China's state reforms entered a new phase in the late 1970s. The message was later more clearly conveyed when Deng remarked during his famous South Tour in 1992 that, "Singapore enjoys good social order and is well managed. We should tap on their experience and *learn how to manage better than them*" (SIPAC, 1999). This vision set the tone for the strong political support and commitment from both the Chinese and Singaporean leadership; from the Chinese leadership, for the opportunity to pick the minds of their Singaporean collaborators, and for the Singaporean leadership, for the opportunity to demonstrate the effectiveness and transferability to other Asian contexts of the Singapore model. The Park was formally launched on May 12, 1994.

However, barely five years into the flagship project, Singapore started to acknowledge that the original vision of transferring its development model to Suzhou was a much more complex and challenging process than earlier envisaged. By early 1999, the township had attracted a resident population of only 5,000 against a target of 600,000; the park was employing 14,000 workers, while the original target was 360,000. The prospects for transplanting the Singapore model were flawed to begin with.

Firstly, the difference in organization of government of the two countries was one of the flaws of the project. Singapore, being one of the world's smallest countries, has one layer of government, which is the state government; in contrast, China has five layers of government, and the sheer size of the country and the physical distance between Beijing and other provinces effectively render the connection between the central government and the local municipal governments more intractable. Although the Joint Steering Council was co-chaired by the then Vice Premier Li Lanqing, the management responsibility rests with the Suzhou government. This complicity caused problems in communication and misunderstanding, and led to Senior Minister Lee's public questioning of the commitment of the Chinese partner to the project (The Straits Times, December 5, 1997; Sydney Morning Herald, March 21, 1998; Far Eastern Economic Review, July 8, 1999).

Secondly, the difference in national context and development experiences had led to conflicts between the two sides over phase objectives of the project. A good example of this was disagreements over the physical structure of the park itself. The Chinese had expected a vibrant park filled with "tall buildings", for that was their perceived way to attract investors; the Chinese partners had also proposed that housing development be carried out hand-in-hand with industrial development. The Singapore partners, however, insisted on the 'Jurong Town Corporation' model, where the development of the industrial sector precedes that of other sectors; the same model also calls for more practical and unattractive buildings, a far cry from the 'tall buildings' expected by their partners. The considerations involved in exporting the Singapore model, it seems, precluded a real exploitation of internalization-specific advantages.

Thirdly, the Singapore partners underestimated the difficulties posed by carrying out such a massive project in China, for the first time. The perceived ethnic and cultural similarities overlooked the multiple competing groups within a common ethnic group; more importantly, the differences in mindset and values shaped by the different economic environment and development experience. The Singapore partners came across as being arrogant, and as having incomplete understanding of the nuances of doing business in China.

These, and other, protracted difficulties led to the announcement in 1999 that Singapore would stop pouring in additional investments and, pari passu, would transfer majority ownership of the Park to the Chinese partners, with the latter taking a 65% stake in the new alignment of interests (The Straits Times, June 30, 1999; South China Morning Post, June 29, 1999 & September 30, 1999). Interestingly, SIP performance turned around within a year following the transfer of majority ownership and management control. To date, SIP has managed to secure contractual investments worth a total of US$15.6 billion, and has established itself as an investment hub for high-tech industries. Over 70% of the investments are in electronics, precision engineering and software development. The Park boasts a tenant profile of prominent American, Japanese and European firms, including 46 Fortune500 companies (SIPAC, 2004).

In retrospect, the transfer of the Singapore model in both industrial management and accompanying social systems has indeed reaped some results (Pan, Zhou & Zhao, 2000), after taking into consideration China's national context. Some of the essence of the Singapore model has found its way into the SIP; some of which are business concepts completely new to China, such as "one-stop" service for investors and a "pro-business" philosophy in attracting investment. In addition, there have been visible achievements in other areas such as social security system reform (through the adoption of a modified version of Singapore's Central Provident Fund system), home ownership, community centers and urban planning, among others. The Suzhou 'experiment', then, would seem to have enjoyed at least partial success; though obviously nothing like what was originally envisioned.

Going forward, the 6th Joint Steering Council meeting has since raised new development goals for the SIP: contractual investment to exceed US$20 billion; utilized investment to surpass US$10 billion; and GDP to hit RMB50 billion. China Singapore Suzhou Industrial Park Development Co. Ltd (CSSD) plans to be listed by 2005 in China, and possibly in Singapore, as well as to build an international standards high-tech park. The completion of the second and third phase of the transportation network and other infrastructure developments, at an estimated cost of US$10 billion, is in progress. The infrastructure development for the rest of the 70 sq km site, the sub-districts outside the core CS-SIP, is due for completion over the next two years. Table 1 updates on SIP's operational statistics.

Case Studies

So far much of the analysis on SIP has relied primarily on secondary data from official sources and press publications and has focused on a macro level. To gain a deeper insight into business environment in SIP, and to evaluate the Park's progress from the tenants' perspective, we present case studies of five selected firms from CS-SIP, based on interviews with personnel involved in their firms' operations in the Park. All interviews were conducted in May, 2004. Theories, from the perspective of the firm, have argued that the production process should be viewed as a "value chain". As previously mentioned, Porter (1986) postulates that the firm is an ensemble of discrete, value activities, namely, primary activities such as inbound logistics, operations, outbound logistics, marketing and sales, and services, as well as support activities. Companies should identify the comparative or location-specific advantages unique to each country/territory, and the competitive or firm-specific advantages unique to the firm/core functions, and then incorporate these advantages into the value chain (Kogut, 1984, 1985; Porter, 1985, 1986).

Rationalization theory suggests that firms should reallocate their operations in different locations to capitalize on the comparative advantages offered in each location. To ascertain the applicability of the above theoretical framework, the interview questions were structured to gather information on the push-pull factors influencing the decisions of the tenants to locate in the Park, as well as some of the advantages and constraints faced by the firms.

Company A: Semiconductors

A major US-based semiconductor manufacturer, Company A has manufacturing facilities in countries like the US, South Korea, Malaysia, the Philippines and Singapore. The company also based one of its design centers in Singapore. Officially registered in 2002, the company opened its 800,000 square foot factory in SIP on September 29th, 2003. Its current employee strength stands at 750, and has targeted sales of US$40-50 million for the first year in operation.

During the interview with the Senior Vice-president for operations, it was learnt that the company plans to increase the number of employees to 2,000 in the next one and a half years, and is looking at sales in terms of billions in a few years' time. As part of the initiatives undertaken by the company to meet the goal of doubling the sales in 2004, the factory is also the first completely new facility built by the company since it became an independent entity in 1997.

The company aims to reduce manufacturing costs by 30%, as well as to balance its dependence on outside contractors with its SIP facility, through reducing its outsourced assembly and test production. The presence of complement industries in the SIP helps, too, as resources become more accessible and easily obtained. This has added on to the company's competitive advantage. However, with more and more companies venturing into SIP, this competitive edge over its competitors can become harder to maintain – with firms competing for resources such as labor and raw materials. "Shortages of skilled manpower and experienced managers can be a major constrain, materials also become more expensive as we go along… we also consider the initial capital cost."

Company B: Engines and Drive Systems

A major German-based engine maker, Company B manufactures a wide range of industrial products such as diesel engines, gas engines, gas turbines, injection systems, fuel cells and vehicles in factories around Asia, with Singapore being its regional headquarter. The company had its grand opening in July 1997 and received its first engine major overhaul job in November. For the year 2003, the Suzhou division registered a turnover of approximately 30 million yuan. It currently has an employee force of 50, mostly local. Today, the SIP branch is engaged in a variety of business activities besides its manufacturing operation. It serves as the after-sale service co-ordination centre for the entire China, provides support to service dealers and OEMs, provides spare part supply, and serves as a customer training centre.

According to the interview with the General Manager for Regional Distributor Management, the main factor that motivates the company to make this strategic move was the "proximity to the market". By having its operations in China, they are able to be close to its customers and make its presence felt in the market. Furthermore, the firm would also prefer to handle its operations itself, instead of letting external parties to provide exclusive customer services.

Despite the success of its SIP factory, the company has also faced certain constraints. Among them, rising labor cost and high labor turnover are the two major problems the company and other industrial manufactures have been experiencing. "There is abundant supply of highly-skilled workers and management staff, thanks to the concentration of tertiary and vocational institutions in the region;

however, we are a bit concerned about the pressure of the rising labor cost. Besides, many locals are not willing to stick to their job for more than 15 months."

Company C: Circuit Protection Solutions

Company C is one of the first ten pioneer tenants to set foot in the Suzhou Industrial Park. The US-based circuit solution manufacturer entered the SIP when the Park was barely incepted, and since witnessed the transformation of farmlands into industrial estates suitable for production and business activities, which took two years to complete. Today, the plant is wholly foreign-owned and the staff strength is about 560. Besides SIP, the company also has plants in Australia, Japan, Korea and other parts of Southeast Asia, with Singapore being the Asia-Pacific headquarters.

The management had long recognized the availability of market and competitive labor costs as major pull factors of the company's venture into Suzhou. The political support behind the project was another important contributing factor to the decision of moving into the SIP. "By 1992, we could foresee that China will have good business prospects," commented the General Manager from the Singapore office.

In the company's view, the transfer of ownership and management from Singapore to China went quite smoothly due to the reduced cost during the transfer. In addition, the transfer of management expertise, commonly known as software, has also been very successful. The company plans to use the SIP plant as a stronghold as well as the regional headquarter, as the company ventures further into China. Following the SIP factory, its first manufacturing plant in China, the company has also set up divisions in Shanghai, Beijing and Tianjin.

Company D: Software development

Established in 1998, the SIP division was the Singapore-based software developer's first operation in China. Positioned as an offshore software development centre, the company targets to fulfill the project delivery resources needed for its business in Singapore, Australia and Hong Kong. Over the years, the original workforce of 8 is now 150-strong, and there are plans to double this figure by the end of 2004. To accommodate burgeoning operations, the company moved to larger premises at the International Science and Technology Centre in the SIP last year. It is currently the largest IT development centre in the Park.

Impending market development was the most compelling consideration behind the company's strategic decision. "In 1998, the Chinese market was demanding mainly hardware, we established a software development centre to obtain readiness for the Chinese market when it started buying software," commented the first General Manager of the company's SIP division.

The company's set-up process wasn't without its challenges. There was only one university in the area and it did not focus on engineering; the company had to recruit manpower from other cities like Nanjing and Beijing. Currently, its human resource requirements are not always met, however, it has been acknowledged that the situation has significantly eased up over the years with the establishment of IT training centers within the park and new accommodation. While the company looks to set up offices in other parts of China, it will continue to grow its operations in SIP.

Company E: Electronics

Company E is a medium sized Swiss firm that is mainly engaged in manufacturing activities. Its Suzhou branch is also a relatively new establishment (June 2002), with a work force of about 200, mostly local, save for two or three senior managers. Gaining access to the Mainland China market was the most important strategic consideration for the SIP setup.

The company was content with the development and upgrade of supporting infrastructures as well as residential amenities in the Park for the past two years; it was also specially mentioned that European and American firms generally enjoy some measure of advantage in terms of "popularity" among locals, over most Asian firms, such as those from Japan, Taiwan and South Korea. Some of the reasons cited include better corporate welfare and human resource policy, as well as more relaxed corporate culture, etc. In fact, the company bears the view that SIP itself was more catered for American and European firms, while many Asian firms have chose Suzhou New District and Wuxi-Singapore Industrial Park.

As for the major constraint faced by the company, it was mentioned that while the Singapore-styled Central Provident Fund system has helped attract talent to the Park, it has also become a cause of concern as it adds to the rising cost of production. Labor turnover was also cited as one of the problems, though the company stressed that there has been a circulation of labor within the Park itself.

Discussion

Of the five interviewed firms, three expressed satisfaction with SIP's infrastructure and management, and the last expressed qualified satisfaction with the market environment. While the proximity to market was the common pull factor indicated by the interviewees, they were quick to point out that the better overall investment environment was one of the most important reasons for their companies' decision for picking SIP over the other regions in China. At the initial stage of the Park's development, Singapore's reputation in industrial management had been a huge draw factor to not only MNCs, but also to Singapore-based SMEs, who consider SIP a "safer" choice without the plague of "hidden costs" commonly found elsewhere in China.

It seems that SIP has been able to retain this advantage despite talk of rising competition from surrounding areas; most of the interviewed firms still cited excellent general infrastructure as an important consideration in selecting their location. The transfer of ownership and management control in 2001 was not a cause of concern to tenants and new entrants; in contrast, most welcomed the change as costs in the Park fell following the transfer. The Chinese management, primarily represented by Suzhou Industrial Park Administrative Committee (SIPAC), is now perceived to be sufficiently competent, following the first few years of 'understudying' from their Singapore counterparts, to run the area as efficiently as the aforementioned Singapore counterparts had. In addition, firms' belief that matters in general will be easier to settle now that they go directly to the Chinese, who "own the road", has added to investors' confidence.

The major constraint factor faced by the Park is labor. High labor turnover rates and the limited range of skills supplied are the most common problems shared by the interviewed firms. These are the local factors that are beyond the control of the planning of the Singapore model, and are some of the considerations that ought to receive more attention from Singapore planners when attempting to clone a model environment in a foreign context.

Conclusion

Singapore's policymakers had great faith in the transborder industrialization strategy, on account of the city-state's connections with both multinational corporations (MNCs), established from the onset of her modern economic development, as well as *guanxi* with Asian business networks. The practical intent, in the context of the Suzhou 'experiment', was to clone a Singapore-styled, "walled city isolated from the rest of the China" (Thomas, 2001). *In a paradox of context, the case-study park encountered greater development challenges when isolated from, than when integrated, into the broader host environment.*

All the same, the measured success of the Park has demonstrated the appeal of the Singapore industrial development model. The investments attracted have provided the basis from which the Parks could grow. Concomitantly, official commitment to Singapore's regionalization initiatives in China remains, as is the willingness of Singapore's planners to search for alternative strategies to re-position the regionalization efforts (Singapore Ministry of Trade & Industry, 2003). Perhaps, in this re-thinking, the 'real politik' of transferring 'Singaporean' institutional innovations to emerging economies will elicit a more incisive scrutiny.

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Table 1: Operational Statistics

General Information on CS-SIP (Feb 2004)	
Country Profile of Tenants (by % of size of investment)	
Scale of Development (hectares)	7,000
Investment by Developer (US$ million)	12,400
Committed Tenants	573
Area Taken Up (hectares)	980
Investment by Tenants (US$ million)	15,200
Export Value (US$ million) (2003)	5,960
No. of Employees	137,029
Country Profile of Tenants (by % of size of investment)	
Japan	13.4
Singapore	22.7
North America	19.2
Europe	14.7
Other Asian economies (and Oceania)	29.1
Others	0.9
Sector Profile of Tenants (by % of size of investment.)	
Electronics/Electrical/IT/Software	58.8
Precision Engineering/Mechanical	7.5
Chemical/Pharmaceutical & Healthcare	11.9
Food & Beverage	5.8
Light Industry	7.9
Logistics and Supporting	8.1
Others	-

Sources: Suzhou Industrial Park Administrative Council & SembPark Management Pte Ltd