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The Internationalization of Singapore's State Enterprise Network in the Context of Asia's Transborder Industrialization: New Evidence from Indonesia, Vietnam and China

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**The Internationalization of Singapore's State-Enterprise Networks in the Context of Asia's
Transborder Industrialization: New Evidence from Indonesia, Vietnam and China**

ABSTRACT

State-led, market-driven interventions have been the hallmark of the Singapore 'success story'. This paper revisits Singapore's state-enterprise strategy, in the context of the city-state's determined efforts at internationalization, and takes a closer look at the portability of this strategy, in the framework of Regionalization²¹, a series of transborder industrialization experiments in Indonesia, Vietnam and China. These state-engineered projects, orchestrated to encapsulate economic space for Singapore-based firms to expand into the region, remains controversial. This strategic initiative is promulgated on the exportability of Singapore's state credibility, systemic and operational efficiencies as well as technological competencies, to locations where these attributes are less distinct. We present evidence culled from surveys and interviews conducted in the Singapore-styled industrial-townships in these three countries. Our results show that the strategic advantage created in the industrial enclaves in Indonesia and Vietnam remains uncertain, whilst the 'experiment' in China is arguably a measured success, now that vested interests are aligned.

Key words: Internationalization - State Enterprise Networks – Singapore's Overseas Industrial Parks

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INTRODUCTION

Giordano and Kato (1993) describe Singapore as the most successful economy among East Asia's Four Dragons. Singapore has risen from the tatters of colonialism to be an important base for multinational manufacturing in the region. The government has laid a foundation for a corruption free administration throughout the years. This coupled with infrastructural efficiency and the overall integrity of its legal and financial systems have, played a central role in attracting foreign direct investments to fuel the city-state's economic development (Mirza 1986; Pang, 1987; Rodan 1989; Huff 1995). State-led, market-driven intervention underscored the city-state's development strategies (Krause 1998; Low 1998; Blomqvist 2001).

However, rising business costs domestically, and growing competition from emerging economies in the region, rendered it an imperative for Singapore's economic planners to re-examine, and expand, the city-state's investment horizons (Wong and Ng 1991; Regnier 1993). The Singapore Economic Development Board (SEDB) positioned the city-state's internationalization strategy in a policy paper, *Gearing Up for an Enhanced Role in the Global Economy* (SEDB 1988). The 1990 Global Strategies Conference and the 1993 Regionalization Forum added new dimensions to these deliberations (SEDB 1990; 1993a), while the policy documents, *Singapore Unlimited* and *Regionalization 2000*, encapsulated the stratagem for Singapore's participation in the dynamic growth of regional economies like Indonesia, Vietnam and China (SEDB, 1995a, 1995b; Pang 1995; Okposin 1999).

The Singapore government's role as a facilitator and partner is evident from the creation of familiar Singapore-havens via industrial parks in neighboring countries and the restructuring of taxation policies (Singapore Ministry of Finance 1993; SEDB 1993b). The state also embarked on fostering trusted regional networks identical to those within its domestic market, whereby interlocking interests and perceived commonality of values, crystallized a system of cooperative competition. Implicit in this stratagem was the government's intent to draw on its state enterprise network (or, in local parlance,

Singapore Inc.), and extend this network to facilitate business ventures in the region (Yeung 1998; Zutshi and Gibbons 1998; Pereira 2000). This strategy to remain economically competitive in the global economy has been characterized by many as the building of platforms for national growth through the management of strategic alliances and ‘collaborations’ with private or semi-private enterprises on national economic projects. Theoretically, the ‘vested interests’ within the interlinked collaborative system serve to expedite processes, garner exclusive incentives, and negate inept bureaucracy (Yeoh et al 2004a).

The transborder industrialization strategy itself is a synergy of state intervention policies. In the initial phase, political leaders negotiate the projects’ institutional framework that typically involves garnering special investment conditions in the host locations. They also secure endorsement from host-country governments so as to provide the projects political patronage and protection which are essential in wooing potential investors. In the second phase, government-led consortia, typically comprising of Singapore government agencies and government-linked companies (GLCs), take on the role of primary investors in development of the parks. This is premised on the reluctance of private-sector firms to take on investments of such gargantuan scale that require a fair amount of time before hitting the breakeven. Moreover, the high risks involved in venturing into a relatively undeveloped and unfamiliar locale renders it inherently unattractive to private enterprises. This is due to the uncertain political climate and investors’ interests. In the latter stages, government agencies actively market these projects to Singapore-based multinational enterprises (MNEs), on top of the internationalization of Singapore companies. The presence of government agencies and government-linked companies, as ‘business architects’ and ‘knowledge arbitrageurs’, also adds weight to these promotional efforts.

This paper hence focuses on the created variables of this selective intervention, as well as the attractions posed by the park’s partners to investors. We aim to test if these variables were similarly perceived as such by the resultant investors in the parks, and also how they measure up to the realities of the host business environments. In the following section, we outline the theoretical considerations that underscore Singapore’s regionalization strategy. This is followed by an overview and explanation of the

political and historical backgrounds of the case-study parks. Thereafter, we detail the methodology of our field research, and present our findings and the preliminary inferences we draw from them; and then, with reference to the empirical findings, we discuss the issues and challenges the parks face, and finally conclude that, while the parks have achieved some limited success, they have been, and remain, vulnerable to the combinations of socio-political and simple economic factors that radiate from their host environments.

THEORETICAL CONSIDERATIONS

Dunning's (1980, 1988) eclectic paradigm sought to provide the analytical basis for explaining the activities of firms situated beyond their national boundaries. The OLI paradigm was used to explain the ability and willingness of firms to serve markets, and examine the reasons for their choice of exploiting this advantage through foreign production rather than domestic production, exports or portfolio resource flows through the interaction of Ownership-specific (O) advantages, Location-specific (L) advantages, and Internalization-incentive (I) advantages. The paradigm was reconfigured to constitute the 'asset-augmenting' aspects of FDI and MNC activity. For instance, O-advantages have been separated into static and dynamic - static advantages describing the advantages possessed by a firm that generate income at a particular point of time and dynamic advantages illustrating the proprietary factors which permit a firm to boost its incoming-generating assets over time.

Dunning (1998), Porter (2000), and others (surveyed in Jovanovic 2003), have further reiterated the importance of the spatial dimension, such as location-advantages as affecting the competitiveness of investing firms. The strategic choice of firms' locations reflects twin aims - to not only transfer their resources to the host countries, but also to gain access to the available strategic assets (Makino and Delios 1996). Like O-advantages, L-advantages can also be classified as static and dynamic. While an industrial township facilitates companies' resource-dependent operations with its static L-advantages, the geographical concentration of such activity also engenders dynamic L-advantages such as asset-

augmenting activities (e.g. R&D) and agglomeration benefits. Given their deeply entrenched sources, these dynamic L-advantages cannot be easily replicated elsewhere (Markusen 1996). The location in which firms locate their production, organization and use of assets emerges as a critical competitive advantage.

The roles of governments in advancing the competitiveness of a country or region within a country need to be altered accordingly, as created assets supersede natural factor endowments as a key determinant of location (Dunning 1995, 1997a). Dunning (1997b) and Stopford (1999) also argue that governments need to ensure that the availability, quality and cost effectiveness of general purpose inputs have to match up to the standards of their global competitors, as well as to create and sustain an institutional framework and ethos. This is to facilitate a continuous upgrading of the resources and capabilities within its jurisdiction and facilitate, rather than impede micro-regional clusters development and upgrading.

Singapore's industrial township projects in Indonesia, Vietnam and China, represent collaborative efforts by the Singapore and respective local governments to create location-bound advantages within more uncertain environments, through a propitious combination of cost-effective factors of production, efficient infrastructure and management expertise; i.e., supplementing natural location-specific advantages with engineered ones crafted to attract foreign direct investments to the parks. *Our field research, therefore, tests whether this mix of advantages has been successful in attracting investment to the parks; and, perhaps more importantly, the tangibility of, and the success of said advantages in retaining said investment; in the face of an ever-changing economic landscape and the mixed enthusiasm of potential investors.*

SINGAPORE'S OVERSEAS INDUSTRIAL PARKS

Background

The first of the industrial-park programs, Batamindo Industrial Park (BIP), was launched in 1992 as a joint-venture between Singaporean government-linked companies (GLCs) and the Salim Group of Indonesia. Singapore's leading industrial infrastructure builder Jurong Town Corporation (JTC) and Singapore Technologies Industrial Corporation (now SembCorp Industries) headed the architectural, physical and managerial responsibilities of the estate. The Salim Group, with its close ties with senior politicians, was assured priority with regards to regulatory control and government permission. This delegation of duties enabled the management to secure top-notch placing on regulations in the host country, without compromising the Singaporean quintessential values of transparency, reliability and efficiency.

Vietnam-Singapore Industrial Park (VSIP) was conceived in line with Singapore's prosper-thy-neighbor policies, to heighten the development of fellow ASEAN nations. More importantly, the VSIP model also served to replicate confidence in Singapore's success in Batam (Indonesia), in providing another low-cost industrial enclave for Singapore-based manufacturers to re-distribute their operations. The idea was first mooted by the then- Vietnamese Prime-Minister, Vo Van Kiet, and Singaporean then-Prime-Minister, Goh Chok Tong in 1994. Singapore made efforts to nurture a strong working relationship with the local authorities. The formation of a management board, chaired by Vice-Chairperson of the Binh Duong Province People's Committee sought to dispel all perceptions that the project had been forced upon by the central government. The Board, with members from various ministries in the government, supervises the allocation of permits and licenses. VSIP is jointly established and managed by a Singapore business group led by SembCorp Industries, and Becamex, a Vietnamese state-owned enterprise in Binh Duong Province.

Unlike BIP and VSIP, the China-Singapore Suzhou Industrial Park (CS-SIP) project was a project set out to showcase the Singapore industrial development model as well as a source of diplomatic leverage with more populous nations. This, in turn, was intended to endorse the perception of Singapore's policymakers that the city-state's reputation for efficient and transparent administration could be marketed to the region. CS-SIP was set up as a joint venture between a consortium of Chinese and Singapore-based investors; the Chinese consortia's then 35 percent stake was shared amongst 12 organizations, mainly national state-owned enterprises and investment companies of the Suzhou city and Jiangsu province, while the Singapore consortium's initial 65 percent stake was distributed amongst 24 organizations, mainly Singapore GLCs, and the Salim Group' subsidiary, KMP China Investments. The two groups retained separate identities and responsibilities, taking up projects according to their agreed roles (SIPAC, 1999). CS-SIP was officially launched in 1994. However, the slow progress in the initial years resulted in financial losses for the Singapore-led consortium, which funded the land development and infrastructure, and also for Singaporean investors involved in peripheral projects. In June 1999, it was announced that Singapore would transfer 30 percent ownership to the Chinese consortium in 2001, retaining only 35 percent share in the project.

Enclaves for Enterprise

The archetype industrial park, BIP, was constructed to be self-contained, with communications and linkages running through straight to Singapore, thereby circumventing Indonesian authorities. The estate includes amenities like power generators, water treatment plant, sewerage system, telecommunication facilities and business centres. BIP also has its own shipping provider and warehouses, to cater for consignments to and from Singapore. The aim of this design is to emulate a manufacturing domain similar to that of Singapore's, procuring prime Singaporean standard and quality in a low-income economy. BIP also engages the services of an employment agency to source for workers in Indonesia, mainly recruited from Java and Sumatra. Of the 65,000 workers in BIP, over 85% are female, aged between 18 and 22.

BIP's first tenants were mainly the subsidiaries of multinational corporations already expanding in Singapore seeking to lower costs while maintaining close proximity to their higher end Singapore-based operations. Cumulative investments and export value peaked at US\$2million in 2005 and the occupancy stands at 85 in 2005. Of these, the highest concentration was that of Japanese companies at 39, with Singapore-owned companies a distant second at 25. American and European investors accounted for less than a fifth of the tenant base. There is a high concentration of electronics operations, and supporting operations to the electronics sector.

Like BIP, VSIP is designed as a self-contained, self-sufficient industrial park with prepared land plots, and ready-built factories, offering a hassle-free, one-stop service, and Singapore-style management expertise and infrastructure support. To ensure strategic proximity, VSIP is located in Binh Duong Province, just 17km north of Ho Chin Minh City, and less than an hour's drive from the international airport and seaport. A 300,000 working population in a 15-km radius also provides a ready talent pool of skilled and low-cost workers. Investors in VSIP have priority in employing graduates from the Vietnam-Singapore Technical Training Centre.

VSIP's first tenants included 3M, Sandoz, Sakata Inx, Godrej (India), Liwayway Food Industries, and a mix of Singapore manufacturers like ST Automotive and Star Chemicals. However, unlike BIP, where the concentration on electronics and other light industries ties in with the restructuring of Singapore's manufacturing sector, VSIP is less selective in its tenant-profile; the tenant-mix reflects the overpowering importance of Asian MNEs (85%), while the sector mix ranges from textiles, to electronics and pharmaceuticals. Singapore and Asian countries are represented by various sectors, while the Japanese tenants are highly concentrated on electronics. VSIP's major tenants include Konica, Nitto Denko, Kimberly-Clark, Diethelm and Roche. VSIP has 138 committed tenants from 21 countries, of which 80 are already operational.

CS-SIP was more ambitious, and controversial, as an overseas township project. Designed for its projected 360,000 population, the industrious project was envisaged to be a balanced environment with state-of-the-art urban facilities. CS-SIP was designated as the future of commerciality in Suzhou and the surrounding areas. The Singapore model, as applied to CS-SIP, promised an administration facility that has independence from certain governmental ministries and investments in administrative processes (Cartier, 1995). Like the prototype-BIP, it provided high-quality infrastructure, pollution control, 'one-stop' and corruption-free operating and decision-making processes, minimal entry/performance regulation, transparent financial charges, and the delivery of social and welfare services to support an efficient and co-operative workforce and a work-oriented community.

Contrary to the expectations of many pundits, investments began to pour in almost immediately after the transfer of ownership to the Chinese partners; by June 2001, 193 investment projects worth over US\$5.1 billion were recorded. To-date, CS-SIP has attracted over 1300 foreign companies and 6500 domestic companies, accounting for a cumulative contractual foreign investment in excess US\$16 billion, and cumulative contractual domestic investment of RMB30 billion, with 75000 jobs created. CS-SIP, named as one of the 'next frontier tech cities' of the world by Newsweek, has established its position as an investment hub for *Fortune 500* companies. Over 75 percent of the investments are in electronics, information technology and other high-tech segments. The next phases for construction of transportation networks and other infrastructure developments are at an estimated cost of US\$10billion. CSSD plans to list in China, and possibly, Singapore, within the next 1-2 years.

FIELD RESEARCH

Analysis of the Singapore-styled parks, relying primarily on secondary data from official publications and press reports, is not enough to ascertain the situation on the ground. To obtain primary data from the tenants of parks, we applied the questionnaire developed in Yeoh et al (2000), and surveyed the case-study parks on the differential impact of various pull factors on firms' investment decisions, along with the differential impact of different types of constraints on their operations.

Methodology: Questionnaire Survey

The questionnaire was designed as a comparative study to investigate the various factors influencing firms' investment decisions, along with the problems faced by their operations; specifically, to test tenants' perception of the created variables meant to give the parks an advantage, as mentioned earlier in this paper, as well as measure said past perception against the current reality. The question sets for the tenants in the three industrial parks are similar. The surveys sought to highlight the different push/pull factors facing the park tenants when they chose to relocate their operations in the respective parks, and the operating constraints faced by the respective park tenants. The survey focused on three main areas. Firstly, the basic profile of the respondent: type of ownership, nature of operations, number of employees, sales turnover and its market orientation. Secondly, the factors that attracted the respondents to invest in the park. Data on various constraints was gathered in the third section.

Questionnaire surveys were conducted in Indonesia, Vietnam and China from December 2003 to May 2005. A total of 232 responses were collected from tenant-firms: of these, 52 were located in BIP, 48 were located in VSIP and the remaining 132 in CS-SIP. In all cases, the surveyed tenants were carefully selected so as to obtain a representative distribution of all tenants in the park across both industry and nature of operations; to illustrate this distribution, the respondents were further reclassified in terms of type of ownership, nature of their operations, number of employees, and target markets. The

surveys were conducted through face-to-face interviews in the case-study parks lasting an average of 45 minutes, with staff in senior managerial positions or above present in all cases, to ensure the response of the selected tenants, and the holistic and accurate nature of the obtained responses.

Statistical Analysis: Logit Estimations

Apart from analyzing the descriptive statistics and popular rankings on the responses relating to factors and constraints, a logit model¹ was applied to compare the perceived advantages influencing the tenants' decision to locate in the case-study parks. A similar model was also applied to the constraints faced by the tenants in these parks. The logit estimations are set out in Tables 1 and 2 respectively.

Factors Influencing the Respondents' Decision to Locate in the Case-Study Parks (Table 1)

The success of the Singapore-styled industrial parks rests on the export of the city-state's infrastructural development expertise. This is largely accepted by all three parks. Not surprisingly, 84%, 77% and 72% of the BIP, VSIP and CS-SIP tenants surveyed cited this as a factor that influenced them to locate in their respective parks. Other than Singapore's 'expertise' in infrastructure development,

¹ The logit model involves a binary choice of the i^{th} firm which can be represented by a random variable, Z_i , which takes the value of 1 if a certain choice is made and the value 0 if that choice is not made. The (cumulative) *logistic* distribution function, estimated by the maximum likelihood, takes the following form:

$$P_i = \exp(Z_i) / [1 + \exp(Z_i)]$$

where: P_i is the probability of firm i choosing the factor in question; \exp refers to the exponentiation operator and Z_i is a linear function of the firm attributes, defined as

$$Z_i = \alpha_0 + \alpha_1 S + \alpha_2 J + \alpha_3 P + \alpha_4 M$$

where: $S = 1$ if wholly Singapore-owned, 0 otherwise; $J = 1$ if established via Joint-Venture, 0 otherwise; $P = 1$ if producing intermediate products, 0 otherwise; $M = 1$ if producing industrial services, 0 otherwise; $\alpha_0 =$ constant term; and $\alpha_i =$ coefficient of independent (explanatory) variable.

Hence, if the estimated coefficients in the logit model is statistically significant (as indicated by the z -statistics and p -values, this would imply that the probability of a firm (e.g. foreign-owned) choosing a particular factor is greater than the probability of another firm (of different ownership type) making the choice, after taking into consideration the types of goods and services produced.

'competitive labour costs' was also valued by tenants in all three parks, especially in VSIP and CS-SIP. This could be driven by increasing intensity in global competition and companies' aggressive progresses in productivity and cost-saving. Our logit results re-affirm the deciding influence of competitive labour cost to tenants in VSIP and CS-SIP, in particular, the positive and statistically significant α_5 (=2.152), α_7 (=1.414), and α_9 (=0.960). Interestingly, in both VSIP and CS-SIP, labour costs are a more important factor to Singapore-owned companies. Moreover, Singapore-owned companies in VSIP value the labour cost advantage even more than their counterparts in China, in part due to the labour-intensive manufacturing processes. Another statistically significant result relates to the 'availability of skilled labour' in BIP; negative and statistically significant α_3 (= -01.614) and α_4 (= -1.782) suggest that this factor was not particularly crucial to intermediate products and industrial services companies in this park. A plausible explanation is that most of BIP tenants are subsidiaries of Singapore-based MNCs, with the requisite skilled labour sourced obtained from, or seconded, from their Singapore office; their venture into BIP was primarily to leverage on the park's unskilled labour.

An interesting observation in CS-SIP was that Singapore-owned companies appeared to place less emphasis on the availability of skilled labour, as indicated by a negative and statistically significant α_9 (= -1.083). Although evidence from our on-site interviews suggests a tight labour market in Suzhou, and that CS-SIP companies have to pay a premium for workers with requisite skills, the peculiar response of the Singaporean firms is certainly an area for further research. Similarly, in contrast to much of the received literature on investment incentives, VSIP relies on investment incentives to attract investors. A positive and statistically significant α_7 (=1.762) indicate that VSIP tenants, especially intermediate product manufacturers, see the park's investment incentives as their main reason to situate in that locale. Also, VSIP's low labour-cost image helped in attracting companies to harbour, as shown by a positive and statistically significant α_7 (=1.414).

On a broader front, Singapore-owned companies located in BIP seemed to be focussed on the political commitment from the Singapore government, vis-à-vis other factors, with the commitment as a sign of continued involvement in this flagship project. Our results back this observation with a positive and statistically significant α_1 (=2.614). In a similar vein, the geographical position makes BIP a platform for suppliers. Thus, the presence of major suppliers in the park is crucial to the joint-venture companies. A strong positive and statistically significant α_2 (=3.063) in Table 1 affirms its importance. In contrast, joint-venture companies in BIP placed significantly greater emphasis on ‘political commitment from the host country’ (α_2 =1.022), possibly reflecting their concerns over the political nuances radiating from the host environment.

Major Constraints on the Respondents’ Operations (Table 2)

The ‘cheap’ labor resources which drew companies to CS-SIP proved to be more a perception than a reality to our survey respondents, as ‘rising labor costs’ was one of the main constraints highlighted by these tenant-firms. In particular, industrial-services companies viewed the rising labor costs as a major push factor for them to relocate out of the park., as indicated by a positive and statistically significant β_{12} (=1.438). On the contrary, joint-ventures seemed to be less perturbed by rising labor costs. A plausible, but not necessarily, an exhaustive explanation is that most of these firms ventured into CS-SIP to leverage on the gargantuan Chinese market, more than to tap on inexpensive labour. Our logits result reaffirms this point with a negative and statistically significant β_{10} (= -1.526). On the flipside, a positive and statistically significant β_{10} (=1.204) suggested that shortage of professionals was a perennial problem for the joint-venture firms. Our on-site interviews allude to an ‘urgency’ to recruit such professionals to secure a foothold in the lucrative Chinese market, whilst the park’s initial low-technology positioning may have aggravated this factor.

Interestingly, Singapore-owned firms in CS-SIP do not appear particularly perturbed by labour-related concerns, but were clearly bogged down by regulatory issues, as indicated by a positive and

statistically significant β_9 (=0.971). Of these, lack of transparency as well as frequent changes in the host government regulations seemed to be the most evident, judging by a positive and statistically significant β_9 (=2.200). Not unexpectedly, Singapore-owned companies also regard lack of special connections with local business partners and practical problems with local partners as one of their concerns, as pointed out by a positive and statistically significant β_9 (=1.621) and β_9 (=1.274). They also view competition from the other industrial parks as a major concern, as indicated by a positive and statistically significant β_9 (=0.971). These factors, taken together, hint at the need for greater nimbleness on the part of Singaporean investors in an environment that is no longer ‘Singapore-styled’.

ISSUES AND CHALLENGES

Investment enclaves or ‘shaded places’ attracts foreign direct investment (Lundan 2003), and Peck (1996) suggests that these investment clusters in and around centers of international infrastructure. The Singapore-developed parks sought to capitalize on this by combining superior infrastructure with a range of exclusive investment concessions acquired via negotiations with the various stakeholders in the host countries. Such unique privileges secured by Singapore’s flagship projects are mostly unprecedented and exclusive (at least initially) to the parks, providing a competitive advantage over competing locations. For example, the parks were permitted to build and run their own on-site power and water treatment plants as well as telecommunications facilities. The result was that these parks enjoyed a reliable infrastructural facilities in locales where water cut offs and electricity blackouts are common. Furthermore, the parks’ management boards more often than not include government officials from the host country. This arrangement was to facilitate the parks’ privileged access to investment approvals, endorsements for construction activities as well as immigration-related permissions and import/export permits. This synergistic combination of factors renders the parks self-sufficient and capable of offering investors the formulaic one-stop service that the Singapore-styled infrastructure is reputed for. It should be noted that such services are otherwise atypical in such emerging economies beset with administrative uncertainties. In addition, the parks would supposedly attain credibility through their inherent association

with Singapore, who has enjoyed a positively significant reputation with various multinational corporations for its stable, corrupt-free business ethos. Furthermore, strategic alliances between Singapore's own state enterprise networks and its counterparts in these regional sites are critical in mobilizing the financial resources to complete these multi-million projects. In most cases, this is achieved within a relatively short time frame of 18 to 24 months.

Our empirical findings ascertain that the investment-friendly institutional framework as laid by the Singapore and host governments, plus factor availability and, in the case of CS-SIP, more conducive industrial relations and the presence of major suppliers, have been instrumental in engendering a competitive environment within the townships. Tenants within these parks have reaped significant advantages through tapping on the low-cost competitive environments, on top of relying on Singapore's infrastructure, management and expertise. It would also be interesting to note that Singapore's reputation with MNEs for a stable, corruption-free investment environment does lend credibility, to the effect that locating within the parks, has a side effect of providing a measure of prestige to the firm.

Nonetheless, even the strategically engineered inter-government endorsement of the flagship projects, plus the huge amount resources mobilized through these strategic partnerships, have failed to shield the parks from a gamut of all too practical problems. The following observations update, and offer new insights, on recent developments in these industrial-township projects.

Economics of Market Competition: Singapore's overseas industrial parks are facing mounting competition from competing parks within their vicinity. Competitor parks, some having strong political patronage have burgeoned around BIP. For instance, Panbil Industrial Park is located just beside BIP and boasts facilities comparable to the Singaporean-developed Township. Also, many of these competitor parks are able to offer more attractive rates than BIP. Cost-conscious tenants facing rising labour and material costs in BIP may be tempted to relocate their operations, as stated by several firms during our on-site interviews. Likewise, VSIP's attractiveness has been eroded by competition from newer industrial

estates such as the Linh Trung Export Processing Zone, on top of incumbent parks such as the Tan Thuan Export Processing Zone. Established by experienced and street-savvy developers from Taiwan, China and Thailand, these competitor parks market themselves aggressively on price, charging lower transportation fees accruing from more strategic locations.

CS-SIP likewise is not spared the intense competition arising from the adjacent Suzhou New District as local officials have chosen to market the latter over CS-SIP. Such competition has somewhat subsided after control over CS-SIP was handed over to the Chinese partners, when the interests of the Singapore and local stakeholders came into somewhat better alignment. Nevertheless, CS-SIP continues to face competition from the nearby Pudong New Area and China's five special economic zones in Shenzhen, Zhuhai, Shantou, Xiamen and Hainan. These industrial centers are part of China's larger strategy to attract foreign investments and thus share similar privileges and status as CS-SIP. In recent years, these locations have upgraded their industrial structure and innovated on their management systems, rendering themselves increasingly competitive vis-à-vis CS-SIP. The simple economics of competition have marginalized the premium attached to the 'superior infrastructure' which was the selling point in all of Singapore's industrial-investment enclaves. Moreover, all of these parks' supposedly exclusive investments incentives will, in all likelihood, prove no more than a temporary advantage over the rapidly improving competition.

Vagaries of Political 'Allegiances': The 'institutional' framework of the flagship projects in Indonesia, Vietnam and China rested heavily on personal ties. Over time, these have declined due to various political and social factors stemming from the host environments (Yeoh et al, 2005). In the BIP project, the reliance on the Salim Group was necessary due to the context of 'crony capitalism' the Indonesian system fostered by then-President Soeharto. Salim's political and commercial influence has been waned in the post-Soeharto era. As well, inter-governmental endorsements no longer suffice to secure commitments at the lower tiers of government. Anecdotal evidence from on-site interviews suggests a more complex regulatory environment and increased bureaucracy for foreign investors. Tenants now have

to deal with provincial governments on top of the sub-provincial or district authorities. BIP's reputation as an investment enclave has also been weakened by political developments in the wake of the Asian financial crisis, the September 11 attacks in the United States, the Bali-Jakarta bomb blasts and negative press reports on active terrorist cells within the region.

In Vietnam, investments in VSIP were expected, *in situ*, to benefit from Singapore's ability to secure special concessions. These initial expectations now seem roseate, as inter-government endorsement (in the spirit of ASEAN economic co-operation) has proved insufficient to secure similar commitment in the lower tiers of government. In VSIP, the influence of local administrators, and their interests in competing developments, has compromised the significance of inter-governmental endorsement of the project. The 'special' support from the local authorities has proved to be less significant than envisioned. Improvements on infrastructural projects have translated into a plethora of miscellaneous fee, and added to operating costs - doubtless a far cry from the aid envisioned by majority of tenants who were attracted by the Vietnamese government's perceived political commitment to the project, who now rate government regulation as one of their greatest constraints vis-à-vis CS-SIP. Our on-site interviews further reveal negative undercurrents over Singapore's control and management of VSIP. Anecdotal evidence suggests that tensions have arisen over the Singapore-styled management practices, and these have materialized in perception differences, protracted conflicts and project delays. Although it has not blown into a major issue, it is without a doubt a growing one. Local sentiments towards the Singapore seem to mirror those expressed in the Suzhou-Wuxi experience in China, albeit to a lesser degree. Significantly, SembCorp Industries has announced plans to divest itself of part of its stake in VSIP to reflect a better 'alignment of interests', even as the project is finally registering positive returns on its investment (Yeoh and Wong 2006).

In China, CS-SIP's progress was initially hampered by an approach that was unsuited to the local administrative context. Although the project was endorsed by senior politicians both in China and Singapore, this did not automatically translate into cooperation at the lower tiers of government. Instead,

local authorities chose to promote the existing Suzhou New District, arguably on the basis that they had greater ownership in this development as opposed to CS-SIP, which Singapore controlled. Since 2001, this misalignment of interests has been rectified by the handover of control to the Chinese, and the appointment of key officials, previously steering Suzhou New District, to leadership positions in CS-SIP. The park's managing board is currently jointly headed by Chinese Vice-Premier Madam Wu Yi and Singapore's Prime Minister Mr Lee Hsien Loong. Such realignment of interests has, at face value, resolved the 'paradox of context' (Pereira 2003), which encumbered the CS-SIP initiative. However, CS-SIP yet shares the political patronage of the Chinese officials with many of its competitors (Yeoh et al 2005).

CONCLUSION

The progress of Singapore's overseas parks over a comparatively short period of time indicates the ability of the Singapore's state enterprise network to mobilize economic and political resources to create economic space to maintain her economic competitiveness. These projects have obtained special investment conditions within their overseas localities, with government endorsements that further underscoring its significance. Nevertheless we discover that certain complexities of the individual environments, as well as the rude intrusion of the economics of competition, have hindered the progress and hobbled the commercial effectiveness of the parks.

In Indonesia, the case of BIP is a measured success, judging from its current level of foreign investment. It has also accomplished the Singapore government's mission of developing an enclave with the Singapore-styled administrative and infrastructural efficiency. Although it may have achieved these initial goals, the township has been struggling to gain investment momentum, mostly due to the increased competition for foreign investments and the restricted appeal of its operating conditions. The promised cost advantages may also be withered by the various political uncertainties and frequent policy changes

radiating from Jakarta. However, given the large initial investment and infrastructure outlay, it would be unlikely that investors, in the short run, would pull out and relocate their operations.

In Vietnam, the additional agenda vis-à-vis CS-SIP is that the host nation is a fellow member of ASEAN, and promoting economic development in VSIP is one prong of Singapore's prosperity-neighbor policies. This is apparent from the mix of 'targeted' industries, as well as the park's management style and operations. Notwithstanding such objectives, we submit that heightened competition and endemic corruption in the host environment work in tandem to test this strategic initiative. A combination of rising overhead costs and a tight labor market, together with competition from industrial parks overseas, are placing growing pressure on the park and its tenants. Nonetheless, the park's competitiveness, while dented, is yet intact, and remains a draw to potential tenants.

In China, CS-SIP can be perceived as a strategic thrust by the Singapore government to capitalize upon first-mover advantages in a regional economy with immense market potential. As the first entrant to develop and manage a state-of-the-art industrial park, CS-SIP could arguably enhance Singapore's reputation for infrastructure efficiency and corrupt-free administration. More subtly, its apparent success would leverage various Singapore companies' foray into leverage Singaporean companies' foray into China's aggressive infrastructure plans and commercial-residential township projects. Following the handover to the Chinese partners, CS-SIP has indeed been doing very well for itself, as can be seen both from its 'paper results', and from the upbeat tone of the respondents from the park. However, several labour issues remain to be resolved such as the endemic 'Singapore-symptomatic' problem of rising overhead costs as well as keen competition from domestic parks; minor issues that might as yet balloon into major ones as more and more global entrants seek to tap on China's enormous domestic potential, much as CS-SIP is doing.

To summarize our study, we suggest that the underlying theories for Singapore's regionalization stratagem and, *pari passu*, the strategic advantage created for firms within these industrial-townships have

revealed undoubtedly tangible and remarkable results. Nevertheless, these industrial parks are frequently at risk from the socio-political contexts and administrative complexities that stem from the various host environments. This paper contends that Singapore's calculated and schematized efforts at internationalization, in the framework of transborder industrialization, have been overly optimistic. They are more often than not frustrated by the intricacies of socio-political and economic realities in the host environments. Moreover, the Singapore formula, applied to the variables of economic competition, in the various economic enclaves has resulted in rather deviating conclusions.

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Table 1: Factors influencing Tenants' Decisions to Locate in the Respective Parks

| Factors | BIP | | | | VSIP | | | | SIP | | | |
|--|-------------------|-----------------|-----------------------|---------------------|-------------------|-----------|-----------------------|---------------------|-------------------|------------|-----------------------|---------------------|
| | Type of Ownership | | Nature of Operations | | Type of Ownership | | Nature of Operations | | Type of Ownership | | Nature of Operations | |
| | Singapore | JV | Intermediate products | Industrial services | Singapore | JV | Intermediate products | Industrial services | Singapore | JV | Intermediate products | Industrial services |
| | <i>a1</i> | <i>a2</i> | <i>a3</i> | <i>a4</i> | <i>a5</i> | <i>a6</i> | <i>a7</i> | <i>a8</i> | <i>a9</i> | <i>a10</i> | <i>a11</i> | <i>a12</i> |
| Political Commitment from Host Country | 1.365 | 1.622 | 0.760 | 0.341 | -1.460 | -20.584 | 0.619 | -20.230 | 0.035 | 0.828 | -0.531 | -0.785 |
| | 0.137 | 0.059*** | 0.377 | 0.765 | 0.208 | 0.999 | 0.405 | 0.999 | 0.941 | 0.208 | 0.229 | 0.223 |
| Political Commitment from Singapore | 2.614 | 0.972 | 0.648 | 0.445 | 0.939 | -18.673 | 0.920 | 1.494 | 0.251 | -19.210 | 1.066 | 2.000 |
| | 0.009* | 0.234 | 0.495 | 0.716 | 0.398 | 0.999 | 0.413 | 0.286 | 0.747 | 0.999 | 0.137 | 0.018** |
| Investment Incentives | -1.035 | 20.575 | -1.224 | -1.269 | 0.977 | -20.540 | 1.762 | 1.070 | -0.165 | -0.128 | 0.637 | 0.274 |
| | 0.226 | 0.999 | 0.218 | 0.337 | 0.217 | 0.999 | 0.030** | 0.414 | 0.732 | 0.837 | 0.189 | 0.676 |
| Competitive Overheads | 1.266 | 1.427 | -0.220 | -0.076 | 0.083 | 2.629 | 1.125 | 1.908 | 0.808 | 0.186 | 0.824 | 0.055 |
| | 0.158 | 0.118 | 0.774 | 0.945 | 0.950 | 0.111 | 0.331 | 0.181 | 0.158 | 0.825 | 0.122 | 0.949 |
| Reliable Infrastructure | 0.233 | 20.707 | 0.153 | -1.016 | 0.074 | -0.619 | 0.362 | -21.847 | -0.242 | -0.808 | 0.604 | -0.004 |
| | 0.781 | 0.999 | 0.854 | 0.404 | 0.930 | 0.678 | 0.660 | 0.999 | 0.617 | 0.185 | 0.216 | 0.995 |
| Competitive Labour Cost | 0.947 | 0.096 | -0.104 | 0.364 | 2.152 | 22.617 | 1.414 | 1.592 | 0.960 | 0.356 | 0.475 | 0.705 |
| | 0.414 | 0.921 | 0.910 | 0.795 | 0.015** | 0.999 | 0.094*** | 0.257 | 0.052** | 0.594 | 0.325 | 0.281 |
| Conducive Industrial relations | 0.275 | 2.135 | -0.127 | -1.189 | 0.118 | -19.006 | 0.000 | -19.046 | -0.281 | -0.656 | 0.248 | -0.413 |
| | 0.720 | 0.020** | 0.863 | 0.296 | 0.928 | 0.999 | 1.000 | 0.999 | 0.615 | 0.419 | 0.608 | 0.613 |
| Availability of Skilled Labour | 0.610 | 1.330 | -1.614 | -1.782 | -1.644 | -20.612 | -0.796 | 0.330 | -1.083 | 0.182 | -0.592 | -0.721 |
| | 0.458 | 0.104 | 0.036** | 0.093*** | 0.151 | 0.999 | 0.385 | 0.808 | 0.038** | 0.767 | 0.195 | 0.284 |
| Presence of Major Suppliers | 0.570 | 3.063 | -0.041 | -0.020 | -18.258 | -18.258 | 0.865 | -18.258 | 0.276 | 0.675 | 0.639 | 0.068 |
| | 0.524 | 0.003* | 0.964 | 0.987 | 0.999 | 0.999 | 0.558 | 0.999 | 0.663 | 0.363 | 0.247 | 0.936 |
| Presence of Major Competitors | 1.455 | 1.967 | 1.098 | 1.376 | -18.258 | -18.258 | -18.258 | -18.258 | 0.842 | 0.842 | -18.612 | -18.749 |
| | 0.164 | 0.051** | 0.364 | 0.320 | 0.999 | 0.999 | 0.999 | 0.999 | 0.357 | 0.478 | 0.998 | 0.999 |
| One-Stop Service | -0.529 | -1.555 | -1.471 | -1.026 | 0.223 | 0.000 | 0.223 | 0.000 | 0.590 | 0.298 | -0.338 | -1.372 |
| | 0.657 | 0.438 | 0.293 | 0.599 | 0.782 | 1.000 | 0.782 | 1.000 | 0.220 | 0.638 | 0.463 | 0.092*** |
| Access to overseas market | -0.942 | 0.825 | 0.031 | -0.341 | -1.832 | -20.821 | 0.200 | 0.155 | 0.265 | 0.319 | 0.406 | -0.119 |
| | 0.242 | 0.339 | 0.968 | 0.749 | 0.108 | 0.999 | 0.792 | 0.910 | 0.607 | 0.628 | 0.388 | 0.868 |
| Access to domestic market | 0.323 | 0.233 | -1.074 | 0.919 | 1.032 | 0.240 | -0.320 | 0.633 | 0.209 | -0.198 | 0.129 | 0.567 |
| | 0.761 | 0.845 | 0.336 | 0.449 | 0.206 | 0.871 | 0.678 | 0.629 | 0.679 | 0.750 | 0.779 | 0.424 |

Source: Questionnaire surveys
 Note: p-values are for two-tailed tests.
 * Significant at 1% level
 ** Significant at 5% level
 *** Significant at 10% level

Table 2: Major Constraints on Tenants' Operations

| Factors | BIP | | | | VSIP | | | | SIP | | | |
|--|-------------------|----------------|-----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|-------------------|-----------------|-----------------------|---------------------|
| | Type of Ownership | | Nature of Operations | | Type of Ownership | | Nature of Operations | | Type of Ownership | | Nature of Operations | |
| | Singapore | JV | Intermediate products | Industrial services | Singapore | JV | Intermediate products | Industrial services | Singapore | JV | Intermediate products | Industrial services |
| | β_1 | β_2 | β_3 | β_4 | β_5 | β_6 | β_7 | β_8 | β_9 | β_{10} | β_{11} | β_{12} |
| Shortage of skilled labour | 0.916 | 0.425 | -0.725 | -1.180 | -0.693 | 0.000 | 0.693 | 21.469 | 0.344 | -0.335 | 0.502 | 1.169 |
| | 0.232 | 0.583 | 0.333 | 0.251 | 0.407 | 1.000 | 0.361 | 0.999 | 0.471 | 0.598 | 0.256 | 0.078*** |
| Shortage of professionals | -0.971 | -0.343 | 0.453 | -0.931 | -0.575 | 20.213 | -0.296 | -0.093 | 0.656 | 1.204 | -0.471 | -0.155 |
| | 0.278 | 0.680 | 0.570 | 0.481 | 0.475 | 0.999 | 0.706 | 0.943 | 0.168 | 0.053*** | 0.323 | 0.811 |
| Shortage of R&D staff | N.A | N.A | N.A | N.A | -0.022 | 21.404 | -0.492 | -20.995 | 0.682 | 0.889 | -0.931 | -20.869 |
| | N.A | N.A | N.A | N.A | 0.978 | 0.999 | 0.517 | 0.999 | 0.184 | 0.194 | 0.089*** | 0.999 |
| Rising Labour Cost | 0.174 | -0.260 | -0.373 | 0.249 | -0.693 | -19.817 | -1.012 | -19.620 | -0.048 | -1.526 | 0.736 | 1.438 |
| | 0.830 | 0.743 | 0.638 | 0.823 | 0.563 | 0.999 | 0.393 | 0.999 | 0.923 | 0.073*** | 0.104 | 0.035** |
| Low labour productivity | 1.091 | 0.354 | 0.653 | 1.550 | -0.412 | 1.027 | -0.583 | 0.464 | 0.988 | 1.025 | -0.739 | 0.005 |
| | 0.163 | 0.656 | 0.428 | 0.149 | 0.657 | 0.494 | 0.527 | 0.722 | 0.111 | 0.180 | 0.353 | 0.995 |
| Industrial relations problem | 0.658 | 0.975 | -0.065 | 0.390 | 0.118 | -19.006 | 1.099 | -19.046 | 0.699 | 0.338 | -0.003 | -0.797 |
| | 0.375 | 0.210 | 0.929 | 0.698 | 0.928 | 0.999 | 0.272 | 0.999 | 0.241 | 0.687 | 0.997 | 0.466 |
| Difficulty in obtaining capital equipment | 0.335 | -0.675 | -0.564 | -0.832 | -0.725 | -19.556 | 1.087 | 1.174 | 0.462 | -0.093 | 0.402 | 1.211 |
| | 0.701 | 0.578 | 0.519 | 0.530 | 0.548 | 0.999 | 0.209 | 0.386 | 0.444 | 0.914 | 0.492 | 0.083*** |
| Difficulty in introducing new technology | 0.603 | 1.971 | 0.065 | -21.227 | -0.999 | -19.877 | -0.179 | 0.925 | 0.554 | 0.321 | -0.753 | 0.215 |
| | 0.499 | 0.050** | 0.940 | 0.999 | 0.397 | 0.999 | 0.851 | 0.493 | 0.317 | 0.660 | 0.255 | 0.767 |
| Lack of good supporting services | 0.704 | 0.151 | 0.870 | 1.435 | 0.156 | -20.661 | -0.439 | -0.205 | 0.215 | -0.350 | -0.316 | -0.307 |
| | 0.366 | 0.853 | 0.291 | 0.180 | 0.842 | 0.999 | 0.591 | 0.873 | 0.663 | 0.619 | 0.519 | 0.665 |
| Difficulty securing funds for expansion | 0.767 | 0.488 | -1.155 | -0.324 | -19.134 | 2.944 | 1.440 | 2.944 | 0.143 | -0.200 | -0.725 | -0.801 |
| | 0.420 | 0.654 | 0.223 | 0.779 | 0.999 | 0.092*** | 0.264 | 0.092*** | 0.781 | 0.778 | 0.181 | 0.324 |
| High/rising overhead costs | 0.025 | 0.161 | -0.905 | -1.159 | -0.238 | 0.276 | -0.705 | 1.050 | 0.705 | 0.485 | 0.560 | -0.359 |
| | 0.979 | 0.873 | 0.439 | 0.403 | 0.761 | 0.853 | 0.384 | 0.413 | 0.142 | 0.426 | 0.207 | 0.575 |
| Impact of government regulation | 1.219 | 20.086 | -0.411 | 19.991 | 0.588 | -20.952 | 0.251 | 0.762 | 0.971 | -19.601 | -0.036 | -0.042 |
| | 0.332 | 0.999 | 0.700 | 0.999 | 0.450 | 0.999 | 0.730 | 0.555 | 0.062*** | 0.999 | 0.950 | 0.961 |
| Competition from overseas parks | -1.362 | -1.084 | 1.414 | 0.303 | -0.035 | 0.338 | 1.031 | -0.344 | 1.331 | -0.033 | 0.800 | -0.625 |
| | 0.187 | 0.365 | 0.171 | 0.798 | 0.964 | 0.820 | 0.174 | 0.788 | 0.017** | 0.957 | 0.093 | 0.348 |
| Competition from local parks | -0.502 | -19.967 | -0.392 | -20.118 | 0.656 | -19.629 | -0.824 | 0.648 | 0.305 | 0.514 | -0.384 | -0.247 |
| | 0.692 | 0.999 | 0.713 | 0.999 | 0.460 | 0.999 | 0.490 | 0.624 | 0.519 | 0.405 | 0.380 | 0.692 |
| Protectionistic barriers from developing countries | -18.834 | -0.579 | 19.160 | 0.443 | 0.118 | -19.006 | 1.099 | -19.046 | 0.725 | -18.958 | -1.288 | -0.166 |
| | 0.999 | 1.000 | 0.999 | 1.000 | 0.928 | 0.999 | 0.272 | 0.999 | 0.273 | 0.999 | 0.228 | 0.882 |
| Protectionistic barriers from developed countries | -19.388 | -19.226 | -0.606 | -18.727 | -0.345 | -19.468 | 0.636 | -19.362 | 0.203 | 0.560 | -1.565 | -19.591 |
| | 0.999 | 0.999 | 0.662 | 0.999 | 0.780 | 0.999 | 0.487 | 0.999 | 0.776 | 0.518 | 0.139 | 0.999 |
| Lack of market information | 1.319 | -0.628 | 0.530 | 2.130 | N.A | N.A | N.A | N.A | -0.618 | 0.506 | -1.054 | 0.141 |
| | 0.116 | 0.565 | 0.584 | 0.088*** | N.A | N.A | N.A | N.A | 0.468 | 0.548 | 0.131 | 0.885 |

| | | | | | | | | | | | | |
|--|---------|--------|--------|---------|-----|-----|-----|-----|-----------------|---------|-----------------|---------|
| Lack of personal experience | -19.384 | -0.900 | -0.606 | -19.204 | N.A | N.A | N.A | N.A | -20.497 | -0.225 | 0.733 | 1.165 |
| | 0.999 | 1.000 | 0.662 | 0.999 | N.A | N.A | N.A | N.A | 0.999 | 0.805 | 0.241 | 0.275 |
| Lack of special connections with local business groups | -0.866 | 0.497 | 0.053 | -20.087 | N.A | N.A | N.A | N.A | 1.621 | -19.801 | -0.988 | 1.054 |
| | 0.459 | 0.624 | 0.955 | 0.999 | N.A | N.A | N.A | N.A | 0.032** | 0.999 | 0.258 | 0.342 |
| Problems with local partners | 1.792 | 1.166 | 19.327 | -0.557 | N.A | N.A | N.A | N.A | 1.274 | 0.746 | -1.172 | -0.566 |
| | 0.265 | 1.000 | 0.999 | 1.000 | N.A | N.A | N.A | N.A | 0.093*** | 0.423 | 0.162 | 0.639 |
| Problems with provincial /local authorities | 0.673 | 0.004 | 0.874 | -0.259 | N.A | N.A | N.A | N.A | 1.055 | 1.603 | 2.299 | -17.542 |
| | 0.385 | 0.996 | 0.246 | 0.802 | N.A | N.A | N.A | N.A | 0.435 | 0.256 | 0.057*** | 0.999 |
| Lack of transparency/ frequent changes in host govt regulations | 1.412 | 1.573 | 0.093 | -1.073 | N.A | N.A | N.A | N.A | 2.200 | -0.127 | -0.457 | 0.915 |
| | 0.234 | 0.225 | 0.923 | 0.407 | N.A | N.A | N.A | N.A | 0.004* | 0.914 | 0.564 | 0.395 |

Source: Questionnaire surveys

Note: p-values are for two-tailed tests.

* Significant at 1% level

** Significant at 5% level

*** Significant at 10% level

N.A. Data not available.