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Exporting Expertise: Singapore's Gambit in Vietnam Revisited

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ABSTRACT

Infrastructure can be unreliable and administration subject to corruption in Asia's rapidly emerging economies. This context presented Singapore with unique opportunities to export its expertise to locations where these attributes are less certain, through the provision of superior infrastructure, the ability to negotiate investment concessions and, where existing, through the links to influential business groups in the investment location. This strategic initiative is further premised on the perception that Singapore's positive reputation with multinationals, as well as 'guanxi', or connections, with Asian business networks, will give the industrial-township projects a marketing advantage. Their progress is a litmus test of Singapore's ability to export its efficiency in industrial park development and management outside its borders. To complement our studies on Singapore's flagship projects in Indonesia, China and India, this paper takes a closer look at Singapore's lesser-known project, the *Vietnam-Singapore Industrial Park*. Evidence from on-site interviews and surveys are presented. This paper concludes that progress in this privileged investment zone remains stymied by particular dependencies in the host environment and, *ten years on*, the initial optimism with which this project was unveiled has *not* been justified.

INTRODUCTION

Singapore's regionalization strategy comprised state-led infrastructure projects, and a range of incentives and regulatory innovations designed to assist private companies and individuals move overseas. The program involved the establishment of industrial townships to create a 'Singapore-styled' business environment for Singapore-based companies to expand regionally. The Singapore government, in this instance, takes the initiative to develop regional sites as locations to access resources and markets. This strategic maneuver is premised on the perception that the redistribution of manufacturing activities to low-cost industrial sites will enhance the collective competitiveness of Singapore-based companies that redistribute their resource-dependent operations to these enclaves, as well as Singapore's own competitiveness as a high-value investment location with strategic linkages to the region. *Pari passu*, Singapore lends its competitive strengths in industrial infrastructural development and management to these regional sites to enhance their competitiveness.

The structure of the rest of the paper is as follows: the next section outlines the raison d'etre for Singapore's regionalization stratagem, followed by an update on, the progress of the case study park. The third section sets out the analytical framework for our empirical analyzes, details the research methodology and presents the results of our empirical surveys, which are reinforced by case studies culled from in-depth interviews on-site. The concluding sections section consider the issues and challenges, as well as the implications of these experiences, for Singapore's regionalization program, and invariably the city-state's ability to export its efficiency in industrial park development and management outside its borders.

SINGAPORE REGIONALIZATION STRATAGEM

The city-state of Singapore has continually sought to overcome its resource limitations by extending its economic hinterland beyond its national boundaries. Singapore's global outreach, supported

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by constant economic reform and its competitive strengths, has allowed it to achieve remarkable economic growth in a relatively short span of time. To fuel economic development, the city-state began to make deliberate efforts to woo foreign investors with low-labor costs in the mid-1960s (Rodan, 1989; Regnier, 1991; Huff, 1995; Pereira, 2000). This influx of investment remained the engine of growth until cheaper manufacturing locations that emerged in developing Asian countries eroded Singapore's competitive edge. Subsequently, the government initiated a major industrial restructuring, which saw Singapore transforming itself into a hub for MNEs engaged in higher value-added manufacturing activities (Krause, 1987; Lim et al, 1988). By the late 1980s, Singapore boasted world-class infrastructure, an educated and highly skilled workforce and excellent business support.

Singapore's economic planners sought to expand the island's investment horizons through an overseas direct investment program launched in 1988[2].The main ideas were set out in the policy document, Gearing Up for an Enhanced Role in the Global Economy (Singapore Economic Development Board (SEDB), 1988). The 1990 Global Strategies Conference added new dimensions to these deliberations (SEDB, 1990). Capitalizing on the liberalization of foreign investment controls and high growth rates in the Asia-Pacific region, Singapore looked to develop its 'external wing' by investing in countries across Asia (Wong and Ng, 1991; Regnier, 1993; Pang, 1995; Okposin, 1999; Blomqvist, 2002). Singapore's regionalization program involved, amongst others[3], the establishment of industrial parks in emerging economies in the Asian region which replicated the business environment found in Singapore (Perry and Yeoh, 2000; Yeoh et al., 2004a).The industrial parks were marketed as a propitious synergy of location-specific advantages and Singapore's strengths in infrastructural development and management. These low-cost manufacturing enclaves were established, based on the premise that they would allow Singapore-based MNEs to maintain access to low-cost, resource-abundant centers for their resource-dependent operations, while conducting higher value-added operations in Singapore. Singapore's regionalization program was intended to set in place a strategic configuration for the city-state to concentrate on higher value-added activities, and yet retain important linkages with production centers with low-cost environments. In effect, Singapore's own environment for high-end operations, and its strategic links to low-cost centers in the region would then make it an attractive hub for global corporations.

This strategic repositioning was discussed at the 1993 Regionalization Forum, and encapsulated in the policy document, Singapore Unlimited (SEDB, 1993a; 1995a; 1995b). This point was amplified by the Committee to Promote Enterprise Overseas (Singapore Ministry of Finance, 1993: 13):

> '… Other countries like South Korea, Taiwan and Hong Kong have invested overseas in Thailand, Malaysia, Indonesia, Vietnam and China in a big way in the last 4-5 years. These investments will give their GNP an added boost. Mature economies like those of the US, Japan, France and Switzerland have this external dimension which broadens their domestic operations and help upgrade their economy. For the same reasons, we must grow an external wing to our economy.'

The government's role in the township developments was three-pronged. First, senior politicians and civil servants negotiated the institutional framework for the project, which typically involved garnering special investment conditions in the host location[4]. The stress on exploiting personal ties accords with business practice preferred by the linked communities of 'overseas Chinese' (Hamilton, 1991; East Asia

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[2] This initiative initially sought to accelerate access to new technology, or foreign markets, by supporting Singapore companies to form joint ventures with overseas companies in Europe and North America. Most of these investments proved unsuccessful, resulting in enormous losses by the early 1990s (Balakrishnan, 1991).

[3] The regionalization strategy had several thrusts, including the regional headquarters program (Perry, 1995; Yeung, 2001) and the regionalization of Singapore's indigenous enterprises (SEDB, 1995a, 1995b; Tan, 1995; Yeung, 1998),

[4] Mechanisms include familiarization tours, formal and informal contacts amongst government officials, the constitution of ad-hoc problem-solving committees, and visits by ministerial delegations that emphasize the establishment of interpersonal relationships (Kumar and Siddique, 1994).

Analytical Unit, 1995; Brown, 1998; Yeung, 2002), the ‘bamboo network’ which Singapore made use of in its industrial parks in Indonesia and China. Second, Singapore government agencies and government-linked companies (GLCs) were the prime investors in the infrastructure and real estate development, usually via a ‘government-selected’ consortium (Zutshi and Gibbons, 1998). Third, senior politicians were aggressively involved in the marketing and promotion of the parks:

> ‘Companies can reduce their risks when venturing into Asia by linking up with local partners, and Singapore can help facilitate this process by acting as a ‘Partnership Centre’ to bring together strategic alliances for companies to invest in third countries in the East Asia region. … [We] can provide foreign companies with a convenient foothold through the industrial parks that are being built and managed by Singapore in China, India, Indonesia and Vietnam.’
>
> - Senior Minister Lee Kuan Yew
> (Cited in Asian Review of Business and Technology, 1996)

As well, Singapore’s premier investment promotion agency, the Singapore Economic Development Board, took on the role of ‘business architect’ and ‘knowledge arbitrageur’ (SEDB, 1995a), by encouraging foreign multinationals to locate their regional headquarters in Singapore, whilst redistributing lower-end operations to the industrial parks. The SEDB controls access to a wide range of taxation concessions and regulatory permissions in Singapore, and has great influence over investors who perceive cooperation with the EDB may bring business advantages (Perry, 1995). The government also initiated a series of platforms for strategic discussions and collaboration to market Singapore’s overseas industrial parks (SEDB, 1993b). The Vietnam-Singapore Industrial Park, along with other similar parks in Indonesia, China and India, is an example of this mode of regionalization.

VIETNAM-SINGAPORE INDUSTRIAL PARK (VSIP)

The Vietnam-Singapore Industrial Park is Singapore’s flagship industrial-park project in Vietnam. First proposed in March 1994 by the then Vietnamese Prime Minister, Vo Van Kiet, and Singapore’s then Prime Minister, Goh Chok Tong, VSIP was officially launched in 1996. As with earlier projects, such as the Batamindo Industrial Park (BIP) in Indonesia and the Suzhou-Wuxi experiments in China, Singapore looked to ‘export’ and synergize its efficient infrastructure and management expertise with competitive cost structures arising from location-specific resources in another Asian environment.

VSIP is located in Bin Duong Province, 17 km north of Ho Chi Minh City, and within a 40-minute drive from the international airport and seaports. The self-contained 1000-hectare park boasts a comprehensive suite of facilities such as prepared land plots, ready-built factories, and an on-site customs unit which allows for customs procedures and documentation to be done within the Park, as well as customs inspections within the tenant’s factories. Tenants also have access to a ready pool of low-cost labor from a 200,000 working population available within a 15-km radius. In addition, the Vietnam-Singapore Technical Training Centre (VSTTC) provides skilled manpower. Established in 1998, VTTSC is an S$9.5 million three-way project between the Singapore and Vietnam governments and VSIP. For the first five years of VTTSC’s operations, VSIP was given priority for its graduates. These facilities are further complemented by Singapore management know-how and quality infrastructural support, allowing VSIP to offer convenient, ‘one-stop’ service to its tenants (VSIP Connection, various issues).

In addition, to incorporate lesson learnt from its industrial park projects in China[5] – hampered progress during their development phase due to uneven distribution of ownership and responsibility and insufficient identity of interest between the working parties on the ground – Singapore made deliberate efforts to foster strong collaboration with local authorities. VSIP is jointly developed by a Singapore

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5 There is now an extensive literature on the problems encountered in the China-Singapore Suzhou Industrial Park project (surveyed in Pereira, 2003); various news reports, for example, The Economist (January 3, 1998), The Straits Times (December 5, 1997; May 14, 1999; June 30, 1999); and an unpublished (confidential) report commissioned by the Singapore Government.

consortium led by SembCorp Industries[6] and Becamex, a Vietnamese state-owned enterprise. To pre-empt the perception that the VSIP was a partnership imposed upon by the central government, a Management Board, chaired by the Vice Chairman of the Binh Duong Province People's Committee, was established at the inception of the park. The board, with representatives from the ministries of Trade, Finance and Interior, as well as the General Customs Department, oversees the issue of investment licenses, import/export permits, and construction permits

SEDB's role in promoting VSIP has been pivotal. Prior to the launch of VSIP in May 1995, a total of 13 international companies with investments worth US$80 million reportedly indicated their interest in the Park. Several companies acknowledged the SEDB's efforts in marketing the Park and, in facilitating their set-up process. The pioneer tenants included 3M, Sandoz, Sakata Inx, Godrej (India), Liwayway Food Industries (Philippines), and a mix of Singapore manufacturers like ST Automotive, Star Chemicals and Hwa Hup. The difficult environment post-1997, notwithstanding, cumulative investment commitments in VSIP exceeded US$350 million within the first three years from its launch. By 1998, investments from the 30 tenants in VSIP amounted to US$370 million. In the following year, VSIP saw an increase of tenants to 33, with aggregate investment exceeding US$400 million. Then, VSIP had tenants from 10 different countries, investing in a wide range of industries, including food, electrical and electronics, pharmaceuticals and healthcare, specialty materials, consumer goods and light industries. Today, over US$600 million has reportedly been invested in the development of VSIP, while investment commitments by the Park's tenants are currently valued in excess of US$1 billion. As at May 2004, VSIP has 138 committed tenants from 21 countries, of which 80 are already operational. 26,000 jobs have been created, with the number expected to rise to 40,000 when the rest of the tenants start their operations (Table 1). The Park posted its first profits of US$4 million in 2002. Net profit for 2003 stood at US$4 million, and is likely to exceed US$6million in 2004.

VSIP has a list of priority industries, which adheres closely to the official list of preferred industries[7]. However, VSIP is less selective in its tenant profile, as can be observed from the diverse mix of tenants. This is in marked contrast to the Indonesian parks, where the focus on electronics and other light industries complements the restructuring of Singapore's manufacturing sector. VSIP's sector mix ranges from electronics to light industries to pharmaceuticals (Table 2), while the tenant mix reflects the importance of Asian MNEs (Table 3). Singaporean and non-Asian companies are represented in a broad swathe of industries, in a broad swathe of industries - food, electrical and electronics, pharmaceuticals and healthcare, specialty materials, consumer goods and light industries, while the Japanese companies are largely concentrated in electronics. VSIP's major tenants include Konica, Nitto Denko, Kimberly-Clark, Diethelm and Roche.

THEORETICAL ANALYSIS

Dunning's eclectic paradigm proffered an analytical framework to examine the pattern and extent of activities of firms engaged in value-added activities beyond their national boundaries (Dunning 1980, 1988, 2001). It sought to explain the ability and willingness of firms to serve markets and delve into the reasons behind their choice of exploiting this advantage through foreign production rather than domestic production, exports or portfolio resource flows. The eclectic paradigm postulates that foreign investment will only occur if it is advantageous to combine spatially transferable intermediate products produced in the home country, with at least some immobile factor endowments or other intermediate products in another country. Specifically, the configuration of ownership-specific advantages, internalization-incentive advantages, and location-specific advantages (OLI) determines international production and its nature. The framework goes on to assert that the import of each advantage in the OLI triumvirate and the relationship between them varies across firms, industries and countries and is context-specific. More recent literature has widened the ambit of the eclectic paradigm to include deliberations on the role of infrastructure in the

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6 Other members of the consortium include Temasek Holdings, JTC International, UOL Overseas Investments, Salim's KMP Group, LKN Construction, Sembawang Engineering and Mitsubishi Corporation (Source: http://www.sedb.com.sg).

7 Details are given in Circular No. 8, *List of Encouraged, Limited and Prohibited Industries in Export Processing Zones and High-Technology Industrial Zones*, issued on July 29, 1997.

attraction of new investments (Peck, 1996); the location tournaments for foreign investments (Lundan 2003); the presence of immobile clusters of complementary value-added activities (Markusen, 1996; Porter, 1998); the agglomeration economies of spatial proximity (Krugman, 1998; Porter, 1996); and the business-government nexus in alliance capitalism (Dunning 1995, 1997; Dunning and Narula, 1996).

From the firm's perspective, Porter (1994, 1996, 2000), among others, has argued that not only should the production process be viewed as a value chain, but also that firms should identify comparative or location-specific advantages unique to each country/territory, which will serve to complement the competitive and firm-specific advantages specific to their core functions. Furthermore, according to rationalization theories, firms should situate their operations in different locations to capitalize on the comparative advantages offered in each location. In addition, Dunning (1998) has reiterated the importance of *created* location-advantages in the new economics of competition. As created assets supersede natural factor endowments as a key determinant of location, the roles of governments in advancing the competitiveness of a country or region within a country need to be altered accordingly. Inter alia, governments need to ensure that availability, quality and cost effectiveness of general purpose inputs match up to the standards of their global competitors, create and sustain an institutional framework and ethos that facilitates a continuous upgrading of the resources and capabilities within its jurisdiction and facilitate, rather than impede micro-regional clusters development and upgrading (Dunning, 1995, 1997; Stopford, 1999, Porter 1998, 2000). Singapore's involvement in VSIP and corollary partnership with the Vietnamese government and state-owned enterprises represents an effort to synergize superior infrastructure and efficient and transparent management practices, with the location-specific advantages of Vietnam. The underlying intention is to create an enclave, within a more uncertain environment, where firms can exploit location-specific advantages with greater ease and security.

VSIP aims to provide location-specific advantages for firms with manufacturing operations, particularly those that look to gain easier access to the Vietnamese and neighboring markets. The Park offers abundant unskilled labor and other local resources at low cost, and proximity to target markets. These pull factors are enhanced and strengthened by world-class infrastructure within the park, strong commitment and support from the local authorities and growing bilateral economic cooperation between Singapore and Vietnam. The envisaged product of this combination is an industrial park, distinct amidst the competition, which presents itself as attractive investment enclave.

EMPIRICAL ANALYSES

Research Methodology

To obtain primary data on the differential impact of various pull/push factors on the location-decisions of firms in VSIP, we applied a modified version of the survey questionnaire developed in Yeoh, et al (2000) to the tenants in the park. The questionnaire survey focused on three main areas. Firstly, the profile of the respondents: type of ownership, nature of operations, establishment size (number of employees), sales turnover and market orientation; the second section was structured to gauge the differential impact of various push/pull factors on firms' decision to locate in the case-study park. Data on various constraints were gathered in the third section. Other questions pertaining to the respondents' views on the facilities and services in the Parks were culled from open-ended questions. As well, in-depth case studies of selected VSIP tenants were conducted for a firm-level analysis. The fieldwork was conducted between December 2003 and July 2004. This section presents our survey results.

Questionnaire Survey

Profile of respondents

We interviewed 47 companies in VSIP, which represented 34 percent of the committed tenants in VSIP at the time of the interview. The interviewees were all senior managers at the facilities. Of the 47 respondents, 10 were wholly Singapore-owned, 2 were joint-ventures and 35 were wholly foreign-owned. There were 29 small firms, 9 medium-sized firms, and 9 large firms. As for their nature of operations, 20 manufactured consumer products, 12 manufactured intermediate products, 3 were involved in industrial services, 1 company manufactured capital goods and the rest involved in other operations. In terms of market orientation, 19 respondent-companies targeted the domestic (Vietnam) market, 18 exported mainly to the other ASEAN (Association of South-East Asian Nations) economies, while Japan was the primary market for 10 of the companies interviewed. None of the respondents exported to the Chinese or South Korean markets.

Statistical Treatment of Survey Results

Apart from analyzing the descriptive statistics and popular rankings on the responses relating to factors and constraints, a logit model was applied to compare the push/pull factors influencing the tenants' decision to locate in VSIP and the constraints they encountered. With the aim of examining the attractiveness of the Singapore style infrastructure as well as its suitability to the operation of MNCs, foreign firms are compare to Singaporean firms, pertaining to the push and pull factors affecting them to locate in VSIP. As the operational needs of large firms can be significantly different from those small and medium firms, also most of the foreign firms located in VSIP are large firms, the size of the firms are thus taken as another variable; particularly comparing large firms to small and medium firms. 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[8] defined as:

$$Z_i = \alpha_0 + \alpha_1 F + \alpha_2 L$$

where: F = 1 if wholly foreign-owned, 0 otherwise
L = 1 if large (> 500 employees), 0 otherwise
α_0 = constant term
α_i = coefficient of independent (explanatory) variable

Hence, if the estimated coefficients in the logit model are 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 size of the firms.

Factors Influencing Respondents' Decision to Invest in VSIP (Tables 4 and 5)

Singapore leverages on its infrastructure development expertise and the low-cost labor available in the host environments to market its industrial parks. It supplements these purported advantages with its political commitment to the parks, as demonstrated by the many bilateral agreements between Singapore's government agencies, and government-linked companies, with the host governments (or, political-linked business conglomerates, as in the case of Indonesia). Interestingly, political commitment from the Singapore government was not a major pull factor for most of the respondents. Out of 47 respondents, only 9 cited it as a main pull factor of VSIP; a marked contrast from our earlier studies on the Singapore-styled parks in Indonesia (Yeoh et al., 2004 b).

There is a host of investment incentives that entice multinationals to locate their lower value-added activities in these self-contained enclaves. This has been proven true from our survey as 64% of the tenants surveyed citing it as a significant pull factor; making it a third-ranked main pull factor.

Political commitment of the Vietnamese government was ranked the main pull factors of VSIP, by around 80% of the tenants interviewed. This could be a reflection of investors' worries over Vietnam's political-economic environment, and the impact on their operations.

Not unexpectedly, the reliable and efficient Singapore-styled infrastructure was also the Parks' main draw, with 77% of the respondents citing it as a pull factor for them to locate in the Park. From our statistic analysis, we could not find significant difference between foreign and Singaporean firms and Singaporean join ventures pertaining to the Singapore style infrastructure as a pull factor. However, their views regarding the competitive labor cost as a main pull factor are different. Compared to Singaporean

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[8] These attributes are dummy variables that take the value 1 if they are chosen and value 0 if they are not.

firms and join ventures, foreign firms are less likely to choose competitive labor costs as a main pull factor for them to locate in VSIP, taking into consideration the size of the firms. This is indicated by the negative and statistically significant α_1 (-1.938). In place of the competitive labor costs, foreign firms were more likely to choose access to overseas markets as the main pull factor in VSIP as compare to Singaporean firms and joined venture; again taking into consideration the size of the firms. This is again indicated by the positive and statistically significant α_1 (2.058). Large firms, as compare to small and medium firms, are also more likely to chose access to overseas markets as the main pull factor of VSIP, indicated by the positive and statistically significant α_2 (1.338). Taken together, it can be argued that easy accessibility to overseas markets was a key determinant in the location choice of foreign MNCs while Singaporean firms focus more on cost savings.

Large firms are also more likely to consider competitive overhead as a main pull factor for them to locate in VSIP, as compare to small and medium firms; indicated by the positive and statistically significant α_2 (1.807). This can be argued that with their bigger size and more complicated operation, especially the demand for expensive machineries as well as educated and experienced management teams, overhead costs take up a very significant percentage of large firm's total operation costs, driving them to pay particular attention to it.

Other frequently cited factors included access to domestic markets, competitive labor costs, access to overseas markets and availability of skilled and educated labour. These factors were highlighted by 47%, 43%, 32% and 26% of respondents respectively, underlining the location-specific advantages offered to firms by VSIP.

Major Constraints on the Respondents' Operations in VSIP (Tables 6 and 7)

VSIP is now an established industrial estate development, but our study alludes to emerging constraints which have undermined the attractiveness of the Park. These constraints are categorized into three broad groups, namely, those relating to labor, those relating to organization and technology, and those relating to the "environment" (e.g. government policies / regulations).

72% of the respondents identified shortages of professionals and managers as the major constraint on their VSIP operations. Another frequently cited labor-related constraint was the shortage of semi-skilled or skilled labor (53%), an indication that VSTTC graduates may not yet be equipped with the relevant skill-sets sought by tenants. Surprisingly, not many respondents complained about high and/or rising labour costs, unlike our other studies in Indonesia and China, indicating that the location-specific advantage of 'competitive' labour costs proffered by VSIP remains very much a reality.

However, the Singapore-styled infrastructure, though reliable and efficient, also proved to be costly. The three most frequently cited organization/technology-related problems faced by the respondents were high and/or rising overhead costs, difficulty in sourcing raw materials and lack of good supporting services. These constraints were highlighted by 38%, 38% and 34% of the respondents respectively. Not many complained about rising labour costs. Out of the 47 respondents, only 6 cited it as a main push factor of VSIP. This is significantly different form our studies of other industrial parks such as SIP in China where rising labour costs were frequently cited. This again proves the location-specific advantage offer by VSIP to the firms. Interestingly, compare to small and medium firms, large firms are more likely to consider it as a main constraint of VSIP to them. This is indicated by the positive and statistically significant α_2 (2.666).

Significantly, almost 50% of the respondents cited 'impact of government policies/regulations' as a major problem confronting their operations in VSIP, suggesting that the host government's control over the operating environment, has proved stifling. As well, almost 50% of the respondents highlighted 'competition from overseas competitors', and the economic landscape shaped by overseas industry competitors, as particularly challenging to their VSIP operations.

ISSUES AND CHALLENGES

Like the other flagship projects in Indonesia and China, VSIP was marketed as a low-cost manufacturing enclave, supported by excellent, 'Singapore-styled' infrastructure and management expertise. From our study, however, it would seem that while the localized 'superior' infrastructure and the factor conditions were main determinants that shaped the competitive environment in VSIP, it was the political commitment of the host government, more so than that of the Singapore government, which was similarly a main determinant. Created location advantages were also found to be more crucial to small and medium-sized firms than large firms, due to said firms having comparatively fewer resources and less extensive networks. These results lend support to the rationalization theories, and affirm the agglomeration economies suggested by the location theories, referred to earlier in this paper.

The Singapore-styled parks in Indonesia, India, China and Vietnam have secured a definitive edge over their competitors due to the many exclusive and unprecedented privileges accorded to them by host institutions. While our research shows that respondents did indeed locate operations in VSIP because of these purported advantages, we also find that a myriad of issues and challenges have thwarted VSIP from delivering the one-stop service and location-specific advantages it was designed to offer, restricting expansion and diversification of certain types of operations. A shortage of more highly-skilled manpower, for example, hinders the development of sophisticated manufacturing operations, as well as research and development. Many tenants have been forced to incur higher costs either training locals or hire skilled professionals at a premium, or face voids in positions requiring labour expertise; as a result, companies engaged in high-end manufacturing tend to be limited to smaller operations. Our study also points to VSIP's limitations in serving tenants from a spectrum of industries, and, consequently, a failure in delivering efficient infrastructure and administration to all tenants; arguably, then, VSIP has not quite lived up to its promise to provide reliable one-stop service within a self-contained environment – at least as far as specific industries go. It would seem that VSIP might possibly be a little too suited to labour-intensive operations for its own good.

Another set of limitations faced by VSIP has been arguably due to the fact that its advantages were presaged upon a static environment. Said 'advantages' have since been eroded by various economic realities; its infrastructural advantages, for example, quickly became less relevant due to improvements in the host environment. Improvements in transportation networks and the national power grid, among others, reduced the importance of VSIP's supposedly more reliable power supply, and its proximity to Ho Chi Minh City, airports, and seaports. Strangely enough, these local infrastructural projects have also translated into a plethora of miscellaneous fees, which have added to the operating fees of VSIP's tenants; a lack of transparency from local administrators, as well as the persisting problem of corruption, only exacerbates this challenge for VSIP. The market realities of heightened competition have also made their weight felt, with the entry of newer industrial estates such as the Linh Trung Export Processing Zone, on top of incumbents like 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. The result has been a diminishing of VSIP's location specific benefits, and the calling into question of the premium attached to 'superior infrastructure' in VSIP; all of this at a time when ever-increasing investor interest in China has created a struggle for VSIP to continue to attract the same. Political support from local authorities has also proven to be, in reality, less significant than initially envisaged; our on-site interviews point to negative undercurrents over Singapore's control and management of VSIP, and anecdotal evidence suggests local sentiments towards the Singapore partners were not unlike those expressed in the Suzhou-Wuxi experience in China, and these perception differences have translated into protracted conflicts and project delays, further compromising the competitiveness of VSIP. It is conceivable that the ownership-management structure of VSIP may, in time, be restructured to reflect a better alignment of interests, as occurred in Suzhou. Significantly, Singapore's SembCorp-led consortium has announced plans to divest itself of part of its stake in VSIP, even as the Park is finally registering positive returns on its investment.

Nevertheless, VSIP has managed to provide some purported location-specific advantages such as unskilled labor at competitive cost. It appears that VSIP is best suited for companies with labor-intensive operations, as they can tap into the vast pool of unskilled labor and rely less on expensive capital. This could explain the predominance of firms engaging in low value-added, labor-intensive activities in VSIP. In this respect, VSIP remains competitive and, with its 'Singapore-styled' facilities and amenities, continues to stand out from other locations.

CONCLUSION

Although the initial blueprints of VSIP as a privileged investment enclave in an uncertain context were promising, actual results have indicated their limitations and the early over-optimism over their outcome. While Singapore did successfully 'export' its expertise in infrastructure and administration, both 'software' and 'hardware' were subject to the social, political and economic environments in Vietnam. Given the shortage of skilled labor, endemic corruption and other limitations inherent in the host context, the maintenance of a world-class facility proved costly. Furthermore, the Park has failed to provide an environment for tenants looking to expand their operations to include high value-added activities. As well, economic realities have created a necessity for VSIP to constantly seek new methods to distinguish the park from competitor parks, even as a site best suited for labor-intensive, low-end manufacturing. We therefore postulate that, as evidenced from the VSIP experience, the underlying assumption that an investment enclave can exist, relatively isolated from the conditions in the host environment is unrealistic. Regardless of the privileges it enjoys, VSIP's success is, to an extent, dependent on uncontrollable external factors. Thus far, an array of nuances radiating from the host environment, and alluded to in this study, have stymied the progress of this privileged investment enclave.

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TABLES

Table 1: Vietnam-Singapore Industrial Park
Operational Statistics

General Information	
Investment by Developer	US$600 million
Committed Tenants	138
Area Taken Up	300 hectares
Investment by Tenants	> US$1 billion
Annual Export Value (for 2002)	> US$2 billion
No. of Employees	26,000

Source: VSIP Fact Sheet, May 2004.

Table 2: Vietnam-Singapore Industrial Park
Tenant Profile by Sector

Sector	Percent	Sector	Percent
Electronics	11	Consumer goods	14
Food	9	Logistics	14
Light industries	20	Parts and components	10
Pharmaceuticals	9	Others	13

Source: SembParks Management.

Table 3: Vietnam-Singapore Industrial Park
Tenant Profile by Country of Origin

Country	Percent
Singapore	24
Japan	21
Taiwan	17
Other Asian Countries	22
US and Europe	16

Source: SembParks Management.

Table 4
Factors Influencing Respondents' Decisions to Invest in VSIP
(by popular ranking)

Factors	Frequency	Rank
Political Commitment (Singapore government)	6	9
Political Commitment (Vietnam government)	37	1
Infrastructure Facilities & Support Services (VSIP)	36	2
Investment incentives	30	3
Human Resource-Avail. skilled/educated labor	12	7
Human Resource-Competitive labor costs	20	5
Physical Resource-Competitive overheads	6	9
Access to overseas market	15	6
Access to domestic market	22	4
Presence of major buyers	11	8
Presence of major suppliers	4	11
Presence of major competitors	1	12

Table 5
Factors Influencing Respondents' Decisions to Invest in VSIP
(By Maximum Likelihood Estimates - Binary Logit)

Push/Pull Factors	α_1(Foreign)	α_2(Large)
Political commitment (Singapore government)	-0.405 (0.672)	-19.512 (0.999)
Political commitment (Vietnam government)	0.325 (0.684)	-0.812 (0.325)
Infrastructure Facilities & Support Services (VSIP)	0.091 (0.907)	1.046 (0.352)
Investment incentives	-1.333 0.122	-1.011 0.197
Human Resource-Avail. Skilled/educated labor	1.634 0.145	1.118 0.168
Human Resource-Competitive labor costs	-1.938 0.014 **	-1.266 0.182
Physical Resource-Competitive overheads	-0.573 0.566	1.807 0.055 ***
Access to overseas market	2.058 0.068 ***	1.338 0.106 ***
Access to domestic market	-1.096 0.119	-0.078 0.919
Presence of major buyers	-0.115 0.882	-0.078 0.930
Presence of major suppliers	0.017 0.989	0.377 0.758
Presence of major competitors	17.669 0.999	-17.579 0.999

Note: * Significant at 1% level
** Significant at 5% level
*** Significant at 10% level
n.c. non-convergence
Source: Questionnaire surveys

Table 6
Constraints on Respondents' Operations in VSIP
(by popular ranking)

Factors	Frequency	Rank
Labor-related Constraints		
Shortage of semi-skilled/skilled labor	25	2
Shortage of professionals & managers	34	1
Rising labour costs	6	11
Low labour productivity	11	8
High absenteeism	6	11
Industrial relations problems	6	11
Organizational/Technological-related Constraints		
Difficulty in obtaining capital equipment	9	9
Difficulty in sourcing raw materials	18	5
Difficulty in introducing new technology & techniques	8	10
Difficulty in securing funds for expansion	5	14
Lack of good supporting services	16	7
High/rising overhead costs	18	5
'Environmental'-related Constraints		
Government regulation	22	3
Competition from overseas competitors	22	3

Table 7
Constraints on Respondents' Operations in VSIP
(by Maximum Likelihood Estimates - Binary Logit)

Constraints	α_1(Foreign)	α_2(Large)
Labor-related Constraints		
Shortage of semi-skilled & skilled labor	0.645 0.344	-0.469 0.534
Shortage of professionals and managers	-0.171 0.823	-0.330 0.679
Rising labor cost	0.602 0.635	2.666 0.007 *
Low labor productivity	-0.143 0.856	0.635 0.435
High absenteeism	0.581 0.616	0.872 0.366
Industrial relations problems	0.613 0.594	-0.216 0.854
Organizational/Technological-related Constraints		
Difficulty in obtaining capital equipment	1.281 0.259	-20.081 0.999
Difficulty in sourcing raw material	0.324 0.649	-0.951 0.274
Difficulties in introducing new technology and implementing new techniques	1.000 0.382	1.185 0.171
Lack of good supporting services	0.024 0.973	0.549 0.468
Difficulty in securing funds for expansion	0.309 0.795	1.194 0.234
High or rising overhead	-0.227 0.744	0.888 0.239
'Environmental'-related Constraints		
Impact of government regulations	-0.168 0.802	-0.111 0.882
Competition from overseas competitors	0.284 0.675	-0.130 0.862

Note: * Significant at 1% level
** Significant at 5% level
*** Significant at 10% level
n.c. Non-convergence
Source: Questionnaire surveys