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# Staying Ahead of the Competition: Insights from Singapore's Manufacturing Enclave in Vietnam

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**Staying Ahead of the Competition:<sup>1</sup>  
Insights from Singapore's Manufacturing Enclave in Vietnam**



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## **Staying Ahead of the Competition: Insights from Singapore's Manufacturing Enclave in Vietnam**

### **ABSTRACT**

*The apparent success of Singapore-styled industrial parks in attracting foreign investments into the emerging Asian economies to capitalize on cheap and abundant resources has led, pari passu, to a mushrooming of similarly-patterned competitor parks in close proximity to the flagship projects. Many of the competitor parks offer either similar or comparable facilities, lower rates, or, in some cases, both. The ensuing dynamic competitive interactions between the competitor parks and the Singapore-styled parks have forced a re-examination of the viability of the Singapore advantage in navigating the economics of competition, and in sustaining competitive advantage. The Vietnam-Singapore Industrial Park (VSIP), unsurprisingly, faces this same, familiar predicament; and the premium value placed on its value-added services, self-sufficiency, infrastructure and non-corrupt reputation, has been called into question.*

### **INTRODUCTION**

In spite of early optimism over the Vietnam-Singapore Industrial Park (VSIP), the vast profits envisioned have yet to be realized; a fact primarily due to heightening competition from numerous neighboring industrial Parks. These new, smaller-scale industrial Parks do not always match the infrastructure and facilities offered at VSIP, nor do they aim to; in contrast, they compete on price, charging only a fraction of VSIP's *'packaged'* fees. VSIP initially relied on its excellent infrastructural facilities, support services and positive, corrupt-free administrative reputation to attract and retain tenants. However, tight, dynamic market conditions have compelled some VSIP tenants to seek out less costly alternatives. Experienced and street-savvy industrial-park developers from Taiwan, Korea, Thailand, and even Vietnam itself, thus, have grown into a serious cause of concern for VSIP and its investors.

## THEORETICAL CONSIDERATIONS

Over recent decades, foreign investments have developed into a *major force in the global economy* (Braunerhjelm & Ekholm, 1999). The evolving microeconomics of competition has created a completely *new* array of factors influencing a firm's investment decisions. Dunning's eclectic model seeks to provide an analytical framework to gauge the scope and extent of multinational enterprises' (MNEs) engagement in cross-border value-adding projects and investments (Dunning 1988, 2001). This paradigm proposes that the amalgamation of spatially-transferable intermediate products of the home country with the static factor endowments of the host country provides a potent formula for attracting investments. Current literature suggests even wider realms of the eclectic model, including location competition for foreign investments (Lundan, 2003), the agglomeration economies of spatial proximity (Krugman, 1998), deliberations on the physical and institutional infrastructure's role in the attracting new investments (Peck, 1996) and the business-government nexus in alliance capitalism (Wade, 1990; Dunning 1995, 1997; Evans 1995; Woo-Cummings, 1999).

The dynamics between ownership-specific advantages, location-specific advantages and internalization-incentive advantages (i.e. OLI advantages) determine the nature of international production. Possible contrasting interactions between these OLI advantages are consequent to the environment differences, and contrast on firm, industry and nation planes. Firms cautiously consider ownership-specific advantages through exploiting firm-specific resources; internalization-incentive advantages are derived from aims of reducing transaction costs. The firm's deliberate choices of location reflect two goals; of transferring resources to the host countries, and of gain access to strategic markets (Davies and Weinstein, 2003) and strategic assets (Makino and Delios, 1996; Chen and Chen, 1999).

In a *collision-course* with neoclassical economics, which deals with asset-exploring activities that were designed to maximize the current efficiency of firms while searching for lower transaction costs and consequential benefits, contemporary economists, such as Porter (1996, 2000), argue that comparative and location-specific advantages unique to a vicinity are no longer indispensable aspects to complement

firm-specific competitiveness. Dunning (1998), amongst others, similarly reiterates the significance of *created* location-advantages. Fundamentally, as *created* advantages surpass natural assets as the pivotal location determinant of investments, the governmental roles in striving for national or regional competitiveness would have to be modified.

Several proponents of the *new* economics of competition believe that governments should influence both static and dynamic Location-specific advantages (Lipsey, 1997; World Bank, 1997). Porter (1998, 2000) and Stopford (1999) believe governments have to create sustainable and effective institutions, facilitate resource upgrading, and encourage continuous development and improvement of micro-regional clusters. A cluster, such as the infamous Silicon Valley, is a critical mass of firms or institutions in a particular location, whether it is a park, city or nation. Better information, special access and other pluses, which are hard to accrue from operating at a distance, are provided by the location proximity of institutional, cultural and geographic aspects of firms; with increased dynamism and complexity in the global economy, these advantages are becoming pronouncedly important (Porter, 1998).

Singapore's interests – and active involvement – in VSIP, together with the close collaboration with the Vietnamese counterparts, is a stellar example of efforts to synergize Singapore's advanced infrastructure and transparent and efficient management practices with Vietnam's location-specific advantages; i.e. lower costs and proximity to target markets. However, these strategic OLI advantages are called into question by the rise of competitor parks in Vietnam, which might be eroding the ownership-specific and internalization-incentive advantages of VSIP. In this paper, we will analyze whether this *compelling* strategy of tailor-made regional locality, which are promoted and planned as '*shady corners*' (Lundan, 2003) for Asian-based MNEs to regionalize, is indeed *still as* attractive to the investors.

This paper's structure is as follows: the subsequent section describes the background of, and the philosophy behind, Singapore's regionalization attempts, as well as their progress thus far. After updates on VSIP, the theoretical considerations are applied to the numerical and in-depth case study data gathered from our surveys/interviews conducted in Vietnam. The concluding segments discuss the issues

and challenges facing VSIP, and the implications of our findings on the city-state's regionalization efforts and its approach to industrial township establishment.

## **SINGAPORE REGIONALIZATION**

Since declaring independence in 1965, Singapore, as a city-state, has been attempting to compensate for its limitations in natural resources. From attracting foreign investments, management and technology in its early stages of growth, to developing inter-regional and international collaborations, Singapore has most recently sought to fuel economic progress by extending its economic hinterland beyond its geographic borders.

In the 1960s, Singapore leveraged on its relatively low-cost labor and pitched itself as an investor-friendly, production-efficient locale (Regnier, 1991; Huff, 1995; Pereira, 2000). Focus was placed on export-led industrialization. In the 1980s, Singapore's industrial restructuring, which was accentuated in necessity due to the severe recession in 1985 (MTI, 1986), involved the expansion of Singapore's economic horizons beyond its shores, as encapsulated in the policy document, *Gearing Up for an Enhanced Role in the Global Economy* (Singapore Economic Development Board (SEDB), 1988). Coincidentally, several countries in the region were liberalizing foreign investment controls during the period of time. Singapore capitalized on these circumstances and sought to develop an 'external wing' through investment in these countries. The *Strategic Economic Plan (SEP) – Towards a Developed Nation* (MTI, 1991), spelt out the urgent need to strengthen Singapore's economic fundamentals, develop industry clusters and business niches, and to enhance economic resilience. Local firms were encouraged to venture into the region through the introduction of supporting institutions and other bodies, and schemes that provided financial support and subsidies (Singapore Ministry of Finance, 1993).

A later policy document, *Singapore Unlimited – Regionalization 2000* (SEDB, 1995), described Singapore's regionalization strategy as encompassing three strategic points of approach – private-sector initiated regionalization, the undertaking of large-scale regional investment projects, and development of

industrial sites in the region. The rationale behind the press for regionalization was also succinctly expressed in the same policy document:

“Singapore’s regionalization thrust will help it create economic space beyond the island. It will enable Singapore to ‘borrow’ the region’s resources and markets. In return, the region will also be able to borrow Singapore’s strengths as a global city with international linkages.” (SEDB, 1995, p.9)

The regionalization initiative emphasized the replication of the city-state’s business environment through the establishment of Singapore-styled industrial parks in the regional sites (Perry and Yeoh, 2000). By placing an emphasis on its high-profile infrastructural development, efficient and trustworthy management, Singapore promoted these parks as combinations of local-specific strengths – such as low overhead and labor costs – and Singapore’s reputed strengths in management, administration, and above all, reputation. The Singapore government played three key roles in the development of these regional townships. Firstly, high-level civil servants and politicians negotiated the institutional frameworks of the township developments. Secondly, visits by ministerial delegations placed an even stronger prominence on interpersonal (and international) ties (Kumar and Siddique, 1994). These forays were often government-initiated and involved a ‘government-selected’ consortium (Zutshi and Gibbons, 1998). Lastly, senior government officials played critical roles in the intense promotion of the industrial parks.

Singapore’s regionalization efforts allowed the city-state to ride on the growth of the region, particularly that of China and India (MTI, 2003). From Indonesia (e.g. Batamindo Industrial Park), to China (e.g. China-Singapore Suzhou Industrial Park and Wuxi-Singapore Industrial Park), Singapore engaged actively in the proliferate establishment of industrial estates and townships across the region, many of which have been much in the public eye; amongst its better-known cousins, however, is the relatively lower-profile Vietnam-Singapore Industrial Park (VSIP), the focus of this paper.

## VIETNAM-SINGAPORE INDUSTRIAL PARK (VSIP)

Singapore has consistently been ranked among the top foreign investors in Vietnam for the past 15 years. In 2004, Singapore's investments in Vietnam totaled registered capital of US\$7.37 billion, involving 288 projects (Saigon Times Weekly, 2004); with, noteworthily, as of August 2003, a large portion of this capital tied up in the service sector, followed by those in manufacturing industries.

The conceptualization of VSIP began, in March 1994, with the then-Vietnam Prime Minister Vo Van Kiet and the then-Singapore Prime Minister Goh Chok Tong. In January 1996, VSIP was officially launched. The success recipe adopted in VSIP was very similar to that of earlier Singapore projects, such as the China-Singapore Suzhou Industrial Park<sup>2</sup>; VSIP has a focus of combining Singapore's strengths with location-specific advantages, principally the lean and competitive cost structures, in Vietnam.

Located in Binh Duong Province, VSIP is 40-minute drive from the international airport and seaports and 17-kilometers from Vietnam's commercial centre, Ho Chi Minh City. Such proximity creates convenient access to professional services, developed infrastructure and social amenities (VSIP, 2004). VSIP is a joint development by a Singapore consortium, led by *SembCorp Industries*, and Vietnamese state-owned enterprise *Becamex*.

As commented by the *Singapore American* (2003), VSIP is known for its "high standards of infrastructure and service". Facilities at VSIP are intended to provide 'one-stop' service to its tenants. VSIP's utilities include telecommunications, sewage treatment and water treatment facilities. A medical centre, business centre and housing are among the amenities that VSIP is considering extending. At present, VSIP has an on-site customs office that facilitates inspections within the tenant's factory sites, with customs certification and procedures completed in the Park itself. Other than ready-built factories

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<sup>2</sup> In VSIP, Singapore applied lessons learnt from its China experience, and made calculated efforts to encourage collaboration with local authorities. A *Management Board* was set up, chaired by the Vice-chairman of the Binh Duong Province People's Committee; this measure anticipated the sensitivity with regards to VSIP being a partnership mandated by the central government.



(both terrace and detached), VSIP provides recreational facilities as well as such administrative facilities as a bank and postal office within its vicinity.

The 200,000-strong working population living within a 15-kilometer radius of VSIP provides a ready pool of low-cost labor. For instance, an unskilled operator's annual wage totals between US\$420 to US\$600, while an engineer costs about US\$1,800 to US\$2,400 (VSIP, 2004). Furthermore, VSIP places significant emphasis on manpower development, as the first Vietnamese Park to construct a training centre to develop its human resources. The S\$9.5 million Vietnam-Singapore Technical Training Centre (VSTTC) provides a source of skilled labor. Priority for its graduates was given to VSIP during the first 5 years of VSTTC operations. In September 2004, the VSIP Scholarship Fund was launched to assist capable students requiring financial aid to continue their education. These scholars, after their graduation, eventually become crucial in the development of the province and in propelling VSIP progress. Now into its third phase of expansion, VSIP has 110 operating tenants involved in 161 investment projects, employing about 33,000 workers. Investment commitment, as at January 2005, totaled US\$840 million.

The administration of VSIP has also taken, in recent years, measures to create a number of man-made advantages for the park. It involves itself actively in creating favourable conditions for tenants; a Memorandum of Understanding signed in October 2003 began the implementation of a fast approval mechanism to cut waiting times, and corporate income tax treatment for foreign-invested enterprises was implemented in January 2004. The real effects of these measures on VSIP's competitive advantage, however, are yet uncertain.

## **COMPETITOR PARKS**

It was only a matter of time, however, before others attempted to capitalize on the same advantages as VSIP; thus the mushrooming of competitor parks around VSIP, aiming to exploit these selfsame advantages. These competitor parks share many of the same strengths as VSIP, while shoring up its weaknesses; giving the erstwhile 'first-mover' a run for its money. These parks include Bien Hoa

Industrial Zone II and the Tan Thuan Export Processing Zone (EPZ). In our on-site surveys, we surveyed the tenant-firms in these two competitor parks to acquire a clearer picture of firm-level location decisions.

### ***Tan Thuan Export Processing Zone (EPZ)***

Tan Thuan EPZ, Vietnam's first EPZ was awarded the ISO 9001 in 2001. A combination of an industrial Park and export facilities, the 300Ha EPZ is the Vietnamese response to development needs of Ho Chi Minh City in the early 1990s; more established, in fact, than VSIP. The Tan Thuan Industrial Promotion Company (TTIPC), which is the joint venture partner of the Central Trading & Development Group (CT&D), manages this EPZ. Interestingly, CT&D, based in Taiwan (Republic of China), received the Labor Order in 2001 on grounds of the social benefits accrued to the local community; creating a philanthropic 'advantage' that CT&D uses to attract corporations to the Tan Thuan EPZ (CT&D, 2004).

The location of the EPZ is strategic – lying within a 4-km radius from downtown Ho Chi Minh City. The EPZ also places emphasis on the investor's lifestyle, with well-planned residential neighborhoods, medical services, leisure facilities, and other amenities. A strategic advantage in the development of Tan Thuan EPZ, compared to VSIP, is that the EPZ is a part of a bigger development of Saigon South. Furthermore, the EPZ offers ready-built standard factories for purchase and lease. The 4-year tax holiday (from the first profitable year), followed by 50% tax deduction for another 4 years for all tenants also forms a pull-factor no less magnetic than VSIP's politically-negotiated concessions.

An on-site visit reveals that, a majority of the 160 companies (as of April 2004) established at the EPZ are Taiwanese and Japanese companies; similarly, a majority of the companies engage in manufacturing services, from textiles to computer chips and machinery. By 2004, Tan Thuan EPZ attracted a total of US\$777.16 million in investments and achieved an occupancy rate of 77.17%. According to CT&D (2004b), more than 75% of the tenants have increased their investments and expanded operations. The EPZ has also been recognized as one of the best Asian EPZs, by such international bodies as the *Economist Intelligence Unit*.

### ***Bien Hoa Industrial Zone (IZ) II***

The 365-hectares Bien Hoa Industrial Zone (IZ) II, established in 1995, is operated by Sonadezi Bien Hoa, a state-owned Vietnamese company – again, an older establishment than VSIP. The IZ is highly accessible, located in Bien Hoa City; 30 km from Ho Chi Minh City Centre and 2 km from Dong Nai Port. The IZ also has comprehensive utilities, including a fire station, clinics and a mall. The infrastructural support includes intra-zonal roads and drainages, and a water supply capacity of 15,000 to 30,000 cubic-meters per day.

Sonadezi Bien Hoa, which currently manages 6 IZs and co-manages another 2 IZs, also coordinated the establishment of the Dong Nai College of Administration and Technology that trains the local labor force and provide a steady flow of cheap, skilled workers. The College focuses on manufacturing (such as footwear) and on administrative tasks (such as office management); an emphasis that parallels VSIP's efforts in manpower development.

As with the Tan Thuan EPZ, the majority of tenants at Bien Hoa IZ II hail from Taiwan, Japan and Vietnam. The Zone has attracted about US\$1.3 billion in investment and created over 42,000 jobs since its establishment. With a favorable location and provision of 'one-stop' service similar to the Singapore-styled service VSIP offers, the IZ enjoys high occupancy rates (90% in 2003). The Dong Nai Industrial Zones Authority (DIZA), in charge of processing and procedures for investors, facilitates this 'one-stop' service by eliminating bureaucratic red tape, allowing the prompt and easy obtaining of necessary documents such as import/export permits, work permits and, most importantly, investment licenses.

VSIP's rivals, as illustrated above, are not just credible and tough, but also established as well. Far from playing the complementary roles to the development of VSIP once envisioned as a possibility, the dynamic of interaction between VSIP and these rival parks have instead evolved into a circumstance of competition for investor confidence, support, and commitment. In subsequent sections of the paper, we will further elaborate on the impact of the new dimensions and dynamics that such competitor Parks have imposed – and are imposing – on VSIP's efforts in attracting investors.

## **EMPIRICAL ANALYSES**

### ***Research Methodology***

Prior analyses on the Parks have relied primarily on secondary data from official publications, press reports, etc. To obtain primary data on the differential impact of various pull factors on firms' investment decisions, as well as that of various constraints on their operations, we have adopted a modified form of the survey questionnaire developed in Yeoh, et al (2000), and surveyed the tenants in VSIP, and its competitor parks, Tan Thuan Export Processing Zone and Bien Hoa Industrial Zone II.

The 3-part questionnaire queried the respondents' profiles, the differential effects of various push/pull factors on the tenant-firms' location decisions, and the operational constraints they encountered. Other questions pertaining to the respondents' views on the facilities and services in the parks were culled from the open-ended questions. In total, 80 responses were collected from these parks. The fieldwork was conducted between December 2004 and October 2004. Our survey results and analyses are presented as follows.

### ***Profile of Respondents***

There were 28 respondents in the VSIP survey, of which 7 were wholly Singapore-owned, 1 was Singaporean joint venture, and 20 were wholly foreign-owned. Respondents were mainly involved in the manufacture of consumer products; 7 were involved in the manufacture of intermediate products, and the remaining in capital goods or in the provision of industrial services. There were 14 respondents with a sales turnover of less than US\$5 million, while the remaining respondents' turnovers topped US\$5 million.

Of the 52 respondents from the competitor parks, 20 were from Bien Hoa Industrial Zone II while 32 were from Tan Thuan EPZ. In entirety, there were 3 wholly Vietnam-owned, 44 wholly foreign-owned and 3 joint ventures. As for the nature of their operations, 15 of the respondents were involved in manufacturing of consumer products, 17 in manufacturing intermediate products, 4 in capital

goods, while the remaining were involved in industrial services. 20 respondents had a sales turnover less than US\$5 million and 16 respondents had a turnover between US\$5 million and US\$50 million.

### **Statistical Treatment of Survey Results**

Apart from analyzing the descriptive statistics and popular rankings on the responses related to factors and constraints, a logit analysis was used to compare the push/pull factors influencing the tenants' decision to locate in the Parks. The logit model, estimated by the maximum likelihood, takes the following form:

$$P_i = \frac{e^{Z_i}}{1 + e^{Z_i}}$$

where:  $P_i$  is the probability of firm being located in the particular park  
 $e$  refers to the exponentiation operator, and  
 $Z_i$  is a linear function of the push/pull factors defined as

$$Z_i = \alpha_0 + \alpha_i \sum_{i=1}^7 F_i$$

where:  $F_1 = 1$  if "Political commitment from the Vietnam government" is selected, 0 otherwise  
 $F_2 = 1$  if "Stable government" is selected, 0 otherwise  
 $F_3 = 1$  if "Investment Incentives" is selected, 0 otherwise  
 $F_4 = 1$  if "Availability of Raw Materials" is selected, 0 otherwise  
 $F_5 = 1$  if "Reliable infrastructure facilities" is selected, 0 otherwise  
 $F_6 = 1$  if "One-stop services" is selected, 0 otherwise  
 $F_7 = 1$  if "Access to domestic market" is selected, 0 otherwise  
 $\alpha_0$  = constant term  
 $\alpha_i$  = coefficient of independent (explanatory) variable

Estimated coefficients in the logit model, if statistically significant, would suggest that the firm choosing the particular push/pull factor is more likely to be from VSIP than from competitor Parks.

A similar logit model was applied to the constraints faced by the Parks' tenants:

$$P_i = \frac{e^{Z_i}}{1 + e^{Z_i}}$$

where:  $P_i$  is the probability of firm being located in the particular park  
 $e$  refers to the exponentiation operator, and  
 $Z_i$  is a linear function of the constraints defined as

$$Z_i = \beta_0 + \beta_i \sum_{i=1}^n C_i$$

where:  $i = 1$  to  $n$ , depending on the type of constraint  
 $C_i = 1$  if constraint  $i$  is selected, 0 otherwise  
 $\beta_0$  = constant term  
 $\beta_i$  = coefficient of independent (explanatory) variable

In this case, estimated coefficients in the logit model, if positive and statistically significant, would suggest that the firm choosing that particular constraint is more likely to be from VSIP than from competitor parks.

### ***Factors influencing respondents' decision to invest in VSIP/Competitor Parks (Table 2)***

Investment incentives offered by the parks was the most popularly stated consideration for the siting of operations in all three parks; 61% of the VSIP respondents and 92% of competitor parks respondents felt that the investment incentives, as part of the investment climate, were particularly vital in the firm's decision to invest in the park. Compared to VSIP firms, the firms in the competitor parks are more likely to locate in a park on grounds of investment incentives, as indicated by the negative and statistically significant  $\alpha_3$  (-2.205); possibly a signal of more attractive incentives being offered by the competitor parks. In VSIP's case, however, 'stable infrastructure' was just as popularly quoted as investment incentives, as reflected by the strong positive and statistically significant  $\alpha_5$  (3.325); considering this, it is possible that in VSIP's case, the investment incentives were only as attractive as the promised stability and reliability of its Singapore-styled infrastructure; in other words, taken together, it is possibly less a signal of more attractive incentives being offered by competitors, than one of the high import placed on the Singapore-styled infrastructure by tenants.

Political commitment also weighed in heavily as a crucial pull factor, with about 46% of respondents from both VSIP and competitor parks quoting it. For competitor parks, of course, this was in reference to commitment from the Vietnamese government; but interestingly, for VSIP, the distribution was still skewed heavily towards commitment from the host government, with only 10% citing commitment from the Singapore government as opposed to 36% citing commitment from the Vietnamese government. Singapore's political capital, it would seem, is little sought after by investors; whereas Vietnamese political

capital seems to not just be in high demand, but also in high supply, given the high likelihood of it being a factor in the location decisions of firms in competitor parks, as indicated by the large negative  $\alpha_7$  (-2.621) – in other words, support from the host government would seem to be far from an exclusive right of VSIP. It is worth noting, however, that political commitment was, despite the high number of respondents quoting it, only the sixth most often cited factor for respondents from VSIP; possibly signaling a difference in priorities between investors in VSIP and competitor parks.

### ***Constraints on Respondents' Operations in VSIP/Competitor Parks (Table 3)***

Our study identifies implicitly the emerging constraints that are beginning to pose limitations to VSIP and its competitors. These constraints were broadly classified into three categories; labor-related, organization and technology-related, and local 'environment'-related (e.g. regulatory and competitive).

#### *Labour-related constraints*

Shortage of professionals and managers was cited by both VSIP and competitor-park tenants as being among the most critical constraints. The moderate and significant positive  $\beta_1$  (1.776) implies that firms situated in VSIP are more likely to face such constraints. With 75% of VSIP respondents recognizing this constraint, VSIP's ability to provide a steady flow of managerial and professional labor is severely in question; in contrast, only 44% of non-VSIP tenants face a similar predicament. This is a probable indication of an urgent need for VSIP to train and develop professionals; almost certainly it is one of the VSIP's weaknesses which the park's competitors have managed to improve on.

Another statistically significant constraint identified was the problem of high absenteeism. 32% of non-VSIP firms felt that high absenteeism was a considerable constraint, while 11% of VSIP respondents had similar perceptions; however, the moderate positive  $\beta_2$  (1.776) indicates that firms experiencing the constraint of high absenteeism were somewhat more likely to be from VSIP, implying a disparity in worker commitment between VSIP and its competitors. The possible implications are myriad and manifold; perhaps labour discipline is lacking, perhaps workers feel themselves to not be treated as well – or perhaps, even, due to the Singapore connection, and the idea of imposed foreign ownership which the

Singapore government tried to avoid creating. The last, however, is not highly likely, given that tenants in the competitor parks do, indeed, still find it to be a major problem.

A shortage of semi-skilled and unskilled labor was also quoted as one of the largest labour-related constraints on operations, with this factor being most often quoted by respondents from the competitor parks, and second-most often quoted by VSIP respondents. This appears to be a universal constraint and is likely more due to locational factors than any policy of VSIP or its competitors.

#### *Organizational and technological-related constraints*

The distribution of citations of technological-related constraints was markedly less slanted towards any given factor, but several observations can still be made. Difficulty in obtaining capital equipment featured as the second most popularly-ranked technology-related constraint faced by both VSIP and competitor-park tenants. The small but statistically significant and negative  $\beta_i(-1.027)$  indicates that firms facing such a constraint are probably not from VSIP. This result implies an apparent advantage of VSIP in terms of procurement of capital equipment; perhaps due to its higher degree of establishment in its current business model, as compared to the older, but more recently re-engineered competitor parks. Similarly, the small but significant negative  $\beta_i(-1.027)$  indicates that a firm in the competitor parks is more likely to be constrained due to a lack of good supporting services. Again, the result is to VSIP's advantage. Promoting the park with its '*reliable and efficient supporting services*', VSIP needs to further improve in this aspect; particularly since 21% of VSIP respondents, too, experience this constraint. While it is a weakness of VSIP that the competitor parks have not (yet) improved on, it is nonetheless a weakness, and should be viewed as such.

#### *'Environmental' constraints*

'Impact of host government regulations' and 'competition from overseas industry competitors' were the highest popularly-ranked constraints faced by both VSIP's and non-VSIP parks' tenants. However, the survey results are not statistically significant for analysis; both VSIP and its competitors



seem to be affected equally by these limitations, with no additional support, governmental or otherwise, for either.

## ISSUES AND CHALLENGES

Differentiating itself as a one-stop service centre, with strengths of reliable infrastructure, efficient administration and strong political commitment from both Singapore and Vietnam, VSIP appears to be a typical Singapore-styled park. In recent years, VSIP has apparently secured a lead over its competitors, on grounds of the unparalleled and exclusive concessions it awards to its tenants... or at least, that would be the common belief. Conversely, however, our survey results and logit analyses reflect the erosion of such competitive advantages of VSIP, with the ascendance of other competitor parks. The dawn of these parks – established by other experienced and street-savvy developers from Taiwan, Japan and Thailand, and many with their own historical pedigree – have brought new challenges for VSIP.

With more attractive investment incentives, political support, and business-friendly schemes, the competitor parks are prying away investments from VSIP – all while retaining the worrying ability to undercut the cost margins of VSIP. Possibly this is due to a willingness to accept lower profits on the part of the competitors, or more probably due to the continuing perception of a premium on the part of VSIP, as we discuss below; but it is without a doubt that VSIP is currently at a great disadvantage in terms of price, that great classical *definitior* of demand and supply.

The reliable, Singapore-styled infrastructure remains the main appeal of VSIP. The relevance of VSIP's infrastructural advantages, however, has been eroded by a decade of improvements in communications and transport networks, the national power grid and other supporting infrastructures; fueled, partially, by the investment of VSIP itself. To exacerbate matters, VSIP charges higher fees for use of its 'superior' infrastructure; now, however, the rise of competitor parks that have more aggressive pricing, while offering comparable facilities, has challenged the premium levied by VSIP. Moreover, the locational advantage of VSIP has been worn out by the rise of more strategically-located parks. For

instance, Tan Thuan EPZ is located in Ho Chi Minh City itself, and has better accessibility and proximity vis-à-vis VSIP. The strategic geographic advantage that VSIP once had, too, has been eroded.

The other dimension of the Singapore dimension – the city-state’s political support – also seems to be of far less significance than originally envisioned. Our figures suggest the political commitment of the Vietnam government is often viewed as more crucial than that of the Singapore government. VSIP might thus consider a realignment of interests (possibly a la Suzhou Industrial Park) to greater represent the Vietnamese government’s interest; however, with several locally-owned parks among its competitors, and with the Vietnamese government’s support of many of these competitors, it is unclear how much of a real effect this would have.

VSIP also faces challenges in the competitiveness of its labor force. As reflected in our logit analyses, VSIP tenants are largely concerned about the park’s ability to provide a steady flow of managerial and professional labor. Competitor parks are also perceived to have a somewhat better foundation than VSIP in this aspect. The VSTTC and the provision of scholarships would seem to barely form a scaffold for the structure that needs to come; VSIP needs to intensify its training initiatives and efforts. Shortage of professional labor hinders development of higher-end value-added manufacturing operations. Our surveys also reveal many tenants being obliged to train locals in-house or to recruit professionals at a higher fee; certainly this is another economic reality that might – and, from our figures, probably does, turn investors away from VSIP. High absenteeism, too, is another constraint suffered more by VSIP than by its competitors. Measures should be taken to find the reasons for this pattern of absenteeism, and to correct it as far as possible; lest such labor constraints, apparently more pronounced in VSIP than competitor parks, continue to erode VSIP’s competitiveness.

Possible distinctions VSIP can develop on are the areas of procurement of technology and capital equipment, and the provision of good supporting services. As indicated in our logit analyses, VSIP tenants are comparatively less likely to face poor supporting services, or difficulties in acquiring capital equipment. VSIP’s Singapore-styled industrial park management might be the reason behind these

resilient strengths. The relatively better-quality information systems in VSIP should be further enhanced to create a characteristic niche for the Park. This competitive strategy should be implemented with consideration to other possible measures; including sensitivity to a business's operating expenses. It is certain, however, that VSIP does not enjoy a static and constant advantage in this area; continuous improvement is likely to be almost a requirement to maintain this competitive edge.

## CONCLUSION

The premium value placed on VSIP value-added services, self-sufficiency, infrastructure and non-corrupt reputation, has apparently been misplaced – or rather, *displaced*, by the non-VSIP parks mushrooming in Vietnam. The economic realities of cost and competition have made their presence painfully known to the managers and owners of the Singapore-styled park. However, despite the attrition of VSIP's infrastructural superiority, strategic geography, and competitiveness of its professional workforce, the viability of the Park as an investment location can still be salvaged. VSIP does continue to provide some of its purported location-specific advantages, such as a low-cost unskilled labor force; and while these are quickly being eroded by its competitors, it maintains an (albeit small) edge in capital procurement, provision of supporting services, and other administrative matters. By improving on these distinct advantages and working to constantly enhance its eroded strengths, VSIP can remain competitive; but how it will do so remains to be seen. The challenge to VSIP is a matching response of appropriate urgency to retain the competitiveness of VSIP; what form this response should – or can – take, however, is yet unclear. At the least, however, it is likely to be one economic, and not political, in nature.

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**Table I**

Comparison VSIP and competitor Parks

	<b>Vietnam-Singapore Industrial Park (VSIP)</b>	<b>Bien Hoa Industrial Zone II</b>	<b>Tan Thuan Export Processing Zone (EPZ)</b>
<b>Developer</b>	Singapore consortium led by SembCorp Industries; Vietnamese state-owned enterprise (Becamex)	State-owned Vietnamese company (Sonadezi Bien Hoa)	70% Tan Thuan Industrial Promotion Corporation; 30% Central Trading & Development Group
<b>Year of Establishment</b>	1996	1995	1991
<b>Location</b>	Binh Duong	Dong Nai	Ho Chi Minh
<b>Proximity (from Ho Chi Minh Centre)</b>	17-Km	30-Km	4-Km
<b>Development Size</b>	500-hectares (320-hectares <sup>1</sup> are/have been developed); Option of another 500-hectares	365-Hectares <sup>4</sup> (of which 90% occupied)	300-hectares <sup>6</sup>
<b>Total Investment</b>	US\$840 million <sup>2</sup>	US\$1.3billion <sup>5</sup>	US\$777.16 million <sup>6</sup>
<b>Operating Tenants</b>	About 110 tenants <sup>1</sup>	About 94 tenants <sup>4</sup>	About 160 tenants <sup>6</sup>
<b>Training</b>	Vietnam-Singapore Technical Training Centre (VSTTC)	Vocational training schools	HEPZA's College of Technology and Industrial Management
	VSIP Scholarship Fund	-	-
<b>'One-stop' Service</b>	Yes	Yes	Yes
<b>Ready-built factories</b>	Yes	Yes	Yes
<b>Investment Incentives</b>	Allows for tax incentives (including 2 years tax exemption period for certain industries)	Allows for tax incentives (clean and hi-tech industries)	Allows for tax incentives (including 4 years tax exemption starting from the first profitable year)
<b>Accolades</b>	Known for high standards of infrastructure & service <sup>3</sup>	-	First EPZ to be accredited ISO 140019002 worldwide

<sup>1</sup> - Correct as of May 2004

<sup>2</sup> - Correct as of January 2005

<sup>3</sup> - According to the *Singapore American* (2003)

<sup>4</sup> - Correct as of August 2003

<sup>5</sup> - Since Park Establishment

<sup>6</sup> - Correct as of 2004

**Table II**

Factors Influencing the Respondents' Decisions to Invest in VSIP/Non-VSIP Parks

Variables	Maximum Likelihood Estimates - Binary Logits <sup>ψ</sup>		Popular Ranking			
	$\alpha_i$	<i>p-value</i> <sup>φ</sup>	VSIP		Non-VSIP	
			<i>Frequency</i>	<i>Rank</i>	<i>Frequency</i>	<i>Rank</i>
Political commitment from Vietnam Government	-2.621	0.034 **	10	6	21	2
Stable government	-2.020	0.083 *	13	4	18	4
Investment incentives	-2.205	0.017 **	17	1	44	1
Availability of raw material	3.909	0.027 **	2	7	1	7
Reliable infrastructure	3.325	0.0001 ***	17	1	12	5
One-stop service	1.598	0.067 *	12	5	19	3
Access to domestic market	-1.442	0.069 *	14	3	12	5
Constant	1.470	0.210				

Note: <sup>ψ</sup> Estimated values were taken from “forced entry” regression.

<sup>φ</sup> p-values are for 2-tailed tests.

\* Significant at 1% level

\*\* Significant at 5% level

\*\*\* Significant at 10% level

Source: Questionnaire surveys.



**Table III**

Major Constraints on the Respondents' Operations in VSIP/Non-VSIP Parks

Variables	Maximum Likelihood Estimates - Binary Logits <sup>v</sup>		Popular Ranking			
			VSIP		Non-VSIP	
	$\alpha_i$	<i>p-value</i> <sup>b</sup>	<i>Frequenc</i> <i>y</i>	<i>Rank</i>	<i>Frequenc</i> <i>y</i>	<i>Ran</i> <i>k</i>
<i>Labour Constraint</i>						
Shortage of semi/unskilled labour	-0.914	0.145	14	2	30	1
Shortage of professionals and managers	1.776	0.005 ***	21	1	21	2
Shortage of R&D Personnel	-0.487	0.448	9	3	15	4
Rising labour cost	-1.324	0.160	2	6	8	6
Low labour productivity	-1.175	0.090 *	5	4	17	3
High absenteeism	2.238	0.008 ***	3	5	15	4
Constant	-0.050	0.932				
<i>Organizational/Technological Constraints</i>						
Difficulty in obtaining capital equipment	-1.027	0.090 *	7	2	19	2
Difficulty in obtaining raw material	-0.589	0.316	11	1	24	1
Difficulty in introducing new technology and implementing new techniques	-0.736	0.258	5	5	12	5
Lack of good supporting services	-1.197	0.066 *	6	4	17	3

Variables	Maximum Likelihood Estimates - Binary Logits <sup>ψ</sup>		Popular Ranking			
			VSIP		Non-VSIP	
	$\alpha_i$	<i>p-value</i> <sup>φ</sup>	Frequency	Rank	Frequency	Rank
Difficulty in securing funds for expansion	-1.239	0.143	3	7	8	6
High overheads	-0.797	0.200	7	2	16	4
Others	-1.650	0.064 *	5	5	8	6
Constant	1.355	0.059 *				
<i>Environmental Constraints</i>						
Impact of government regulation	0.707	0.235	15	1	16	2
Competition from overseas Parks	0.378	0.527	14	2	22	1
Protectionistic Barrier: restricting market access to developing countries	-0.187	0.819	3	3	10	3
Protectionistic Barrier: restricting market access to developed countries	-0.636	0.432	3	3	9	4
Others	2.193	0.017 **	1	5	2	5
Constant	-1.074	0.111				

Note: <sup>ψ</sup> Estimated values were taken from “forced entry” regression.

<sup>φ</sup> p-values are for 2-tailed tests.

\* Significant at 10% level

\*\* Significant at 5% level

\*\*\* Significant at 1% level

Source: Questionnaire surveys.