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**EMBEDDED CO-OPERATION IN THE CONTEXT OF SINGAPORE'S
REGIONALIZATION PROGRAM:
THE BATAMINDO EXPERIMENT REVISITED**

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Abstract

The development of Singapore-styled industrial parks has resided on the country's ability to negotiate investment concessions at inter-government level, to provide superior infrastructure, and where existing, through the links to influential business groups in the investment location. Singapore's first transborder industrialization project in Batam (Indonesia) reflects this stratagem. This paper¹ revisits the debate on the attractiveness of the low-cost investment enclaves for multinational investments, with insights from Batamindo Industrial Park. Through evidence from on-site interviews and case studies, this paper concludes that while the project's progress to date has been largely overshadowed by socio-political uncertainties in the host environment, its future outlook remains promising.

Key words: Transborder industrialization – Singapore – Batam, Indonesia – Industrial Parks.

Introduction

Singapore is a city-state which, over the last four decades, has risen to be Southeast Asia's premier world-city, as well as an important base for multinational manufacturing (Rodan, 1989). However, given the inherent confines of a city-state, it has also been driven to hone its ability to leverage global resources to ensure sustained economic growth. Singapore's long-established stratagem of economic development through foreign direct investments has been well documented (Chia, 1986; Pang, 1987; Regnier, 1991; Huff, 1995; Murray & Pereira, 1995). However, rising business costs in the 1980s made it imperative for Singapore to redistribute its labor-intensive activities to neighboring areas, and forge important linkages with low cost production environments in the immediate region (Singapore Economic Development Board, 1993; Singapore Ministry of Finance, 1993; Kanai, 1993; Mahizhnan, 1994; Kwok, 1995; Pang, 1995; Tan, 1995; Kraar, 1996).

It had long been recognized that the Singapore-Indonesia border zone, notably the nearby Riau islands of Batam and Bintan, were capable of attracting labor-intensive industries, and activities with extensive space requirements that are closely linked with Singapore-based activity. However, this potential remained unexploited (Rice, 1989; Esmara, 1975) until the tripartite initiative known as the Indonesia-Malaysia-Singapore Growth Triangle was formed in 1989, in which the southern Malaysian state of Johor was included (Lee, 1991; Perry, 1991; Parsonage, 1992; Toh and Low, 1993; Ho, 1994; Kumar and Siddique, 1994; Naidu, 1994; Peachey, et al., 1998; Grundy-Warr, et al., 1999). The growth triangle, as a concept, and a reality, is passé, but Singapore's strategic interest in participating in the development of the Riau islands remains.

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This paper revisits Singapore's first overseas industrial township project – the Batamindo Industrial Park (BIP).

To provide the context to this paper, theoretical considerations underpinning this flagship project are sketched in the next section. The following section takes a closer look at the Park's progress. The analyses are further reinforced by an empirical survey of the Park's tenants, and case studies culled from on-site interviews. The final section considers the implications of the new evidence on Singapore's broader regionalization program, and evaluates the city-state's determined efforts to harness synergistic complementarities with contiguous areas in its strategic intent to restructure the Singapore economy.

Theoretical Considerations

Several theories have been expounded on the economic integration of regions to spearhead economic growth and development. Perroux (1950; 1955) postulated the concept of growth poles, projecting the notion of an economic space as a field of forces consisting of a nucleus from which centrifugal forces emanate and centripetal forces are attracted. Bouderville (1966), extending Perroux's concept, has defined a regional growth pole as a set of expanding industries located in an urban area inducing further developments of economic activity through its zone of influence. Hirschman (1958), Darwent (1969), Hermansen (1972) and Campbell (1974) added the thesis that inter-industry, multiplier and accelerator linkages play a major role in the development of growth poles and growth centers. Cost reductions through productivity gains, innovations and scale economies are viewed as providing the opportunities for propulsive industries to initiate growth, and to pass growth impulses through the linkage chains. The discourse on growth poles has been extended, in more recent literature, to deliberations on the presence of immobile clusters of complementary value-added activities (Markusen, 1996), the transactional benefits of spatial proximity (surveyed in Dunning, 1998) and, in the context of this paper, on notions of growth zones, 'defined' as the spread from the early nuclei of economic activities to territories adjacent, or in close proximity, to longer established nuclei of industrial growth. In the 1990s, set in the context of the globalization of economic activities, the phenomenon took on cross-border dimensions with the promulgation of regional economic zones (Chia and Lee, 1993; Thant et al, 1994; van Grunsven, 1994; van Grunsven et al, 1995; Parsonage, 1997).

Location theories and, in particular, the agglomeration aspects suggest that there are scale economies to be derived through certain types of industries, or industrial clusters within a region, viz, internal economies, localization economies, and external economies (Parr, 1965). The agglomeration aspects, as applied to the Singapore-Riau 'alliance', include localization economies, urbanization economies, standardization economies and network externalities (Ng and Wong, 1991). Rationalization theories suggest that firms should redistribute their operations in different locations to capitalize on the comparative advantages offered in each location. These theories argue that the production process should be viewed as a value chain, and firms should identify the comparative or location-specific advantages unique to each country/territory, and the competitive or firm-specific advantages unique to the firm/core functions, and then incorporate these advantages into the value chain (Kogut, 1984, 1985; Porter, 1985, 1986; Teal and Yeoh, 1994). In this respect, the Riau parks, given their close proximity to Singapore, fit in strategically (Liew,

1990; Yeoh, 1990; Naidu, 1994; Perry, 1995; Ho and So, 1997).

At the operational level, the strategic thrust of the flagship project was to get investors to look at Singapore and the Riau islands as a single investment region, where “[t]he whole range of business requirements can be supported within a single region” (SEDB, 1989/1990:26). Investors will be presented with a packaged choice to locate the activities along their value chains in the contiguous areas, viz, Singapore can support business operations dependent on advanced technology and sophisticated services, while low value, labor-intensive industries can be located in the Riau islands. Such specialization will enable investors to retain activities in close proximity while making use of contrasting environments i.e. complementary specialization in national border territories (Reza, 1994).

Agreements

Talks between Indonesia and Singapore to cooperate in Batam’s development had been a frequent occurrence during the early 1980s (Regnier, 1991), but were impeded due to Singapore's preference for regulatory concessions. It took until the late 1980s for mutual agreement to be rendered at a time when Singapore's priority was additional production space and Indonesia was prepared to extend foreign investment concessions to kick start Batam's development² (Yeoh, 1990; Perry, 1991; Regnier, 1991; Yeoh et al., 1991). Since 1992, foreign companies in Batam were exempted from the need to devolve a share of ownership to Indonesian partners, along with a reduction in the sectors closed to foreign investors and greater opportunity for foreign industry to locate outside of bonded industrial estates (Hill, 1996). The island’s duty free status was amended to facilitate a proportion of output to be exported to other parts of Indonesia. Investment risks were reduced by allowing foreign companies to manage industrial estates, providing the opportunity for the Singapore government-linked companies to set up the joint venture to develop and manage BIP (Peachey et al., 1998). Although regulatory challenges remain, the Riau investment enclave has retained some advantages because the intervening presence of Singapore reduces opportunities to extract *kebrocan* (a euphemism for corruption) when allocating necessary documentation, an otherwise routine practice in Indonesia (Server, 1996:36). Four ‘flagship’ projects were the direct outcome of Singapore-Indonesian cooperation in the Riau enclave - Batamindo Industrial Park (BIP), Bintan Industrial Estate (BIE), Bintan Beach International Resort, and the Karimun Marine and Industrial Complex (Yeoh et al., 1992).

Batamindo Industrial Park (BIP)

BIP, the first ‘flagship’ project, was launched in 1992. It started as a joint venture 40% owned by

² The cataclysmic collapse of oil prices in the early 1980s impressed upon Indonesia's economic planners the need for a more broad-based development strategy. Deregulatory measures were introduced to stimulate the non-oil sectors of the Indonesian economy. Infrastructural facilities were improved, and investment incentives were liberalized, to mobilize private sector investments, including foreign investments. The Riau islands were an obvious choice to encourage investments not least because Singapore has shown interest in leasing these nearby islands to transcend the city-state's need for inexpensive land and labor. By the late 1980s, the perception from Jakarta was that Singapore was "bursting at the seams", and that the time was right to position Batam and the other Riau islands to take advantage of the spill-over from Singapore.

two Singapore government-linked companies (Singapore Technologies Industrial Corporation, now SembCorp Industries, and Jurong Environmental Engineering), and 60% owned by the Salim Group of Indonesia, one of Indonesia's major conglomerates at the time, with close links to senior politicians, and privileged access to major investment projects in the Riau islands (Hill, 1996). The Singapore partners contribute design, physical development, management and marketing of the Park while a Salim subsidiary, PT Tunaskarya, has responsibility for labor recruitment. This arrangement attaches Singapore's reputation for fair and efficient management to the project, and maximizes the marketing leverage over Singapore-based multinationals (Yeoh, 1993; Perry & Yeoh, 2000). The Park was conceived as a self-contained industrial township with its communication and business linkages through Singapore rather than through Indonesia. Hence, self-containment has resulted in an investment enclave offering facilities close to conditions in Singapore, in marked contrast to the conditions immediately outside the Park. This is also intended to facilitate the marketing of the Park, by providing Singapore development standards in a low-income economy.

BIP's first tenants were mainly subsidiaries of Japanese, American and European multinationals already operating in Singapore, including Sumitomo, Thomson, Philips, Sanyo, Smith Corona, AT&T and Seagate (Yeoh, et al., 1992). Ten years' on, cumulative investments and annual export value in BIP topped US\$1 billion (as at 2003) and US\$2 billion (for 2002) respectively, and the number of confirmed tenants increased from 17 in 1991 to 82 in 2003. 39 of the tenants are Japanese companies with Singapore the next largest concentration. American and European investors have a limited presence. The Park's industrial niche is assembly operations employing young female labor. Over 85% of the 65,000-strong workforce are female, most aged from 18-22. There is a distinct concentration on electronics operations, mainly various component assembly processes, and supporting activities to the electronics sector. (Batamindo Industrial Park Fact Sheet, May 2003; BIP Tenants' List, June 2003). Table 1A summarizes the operational statistics for the Park, and Table 1B, the tenant profile by country of origin and sector mix. There are plans to further expand the Park. The next section presents the findings of our fieldwork.

TABLE 1A
Batamindo Industrial Park - Operational Statistics (as at June 2003)

General Information	
Investment by Developer	US\$470 million
Committed Tenants	82
Area Taken Up	320 hectares
Investment by Tenants	> US\$1 billion
Annual Export Value (for 2002)	> US\$2 billion
Number of Employees	65,000

Source: SembCorp Industries (<http://www.sembcorp.com.sg>)

TABLE 1B
Batamindo Industrial Park - Tenant Profile by Country of Origin & Industry Sector

	Electronics	Electrical	Plastic Moulding	Precision Parts	Packaging	Pharmaceuticals	Medical	Others	Total
Japan	19	7	2	7	2	-	1	1	39
Singapore	7	-	7	4	3	-	-	4	25
USA	5	-	-	1	-	-	-	1	7
Europe	5	2	-	-	-	-	2	-	9
Other Asian Countries	-	-	-	-	-	1	-	1	2
Total	36	9	9	12	5	1	3	7	82

Source: Batamindo Industrial Park, *Tenants' List*, June 2003.

Case Studies

Much analysis on BIP has relied primarily on secondary data from official publications, press reports, etc, which is inadequate. The success of the Park hinges in large measure on its ability to harness the micro-economic processes of specific firms and industries operating in a global environment. The alliance between Singapore and Indonesia should ideally provide a suitable framework within which firms can pursue and develop strategies which support their global business operations and competitiveness. The driving assumption behind the formation of the Park, as well as for the alternative theories discussed earlier, is that each of the regional partners offers different yet complementary advantages to firms. Of importance to the continued viability of BIP is the extent to which investment activities of firms, with cross-national investments in the two contiguous areas, are synergistic and linked within a firm-level division of labor.

To obtain micro data on this aspect of our study, a two-pronged approach was adopted. A questionnaire survey was applied to ascertain the differential impact of various pull factors on the investment decisions of different types of investors (e.g. local or foreign), or the differential impact of various constraints on the operations of firms with different characteristics (e.g. ownership type; establishment size), and case studies of selected tenants in BIP were conducted.

The survey results are reported in a separate paper (Yeoh, Lim & Kwan, forthcoming). This paper presents the findings of our case studies of five multinational companies in BIP, designed to test the applicability of value chain theory of firms operating in BIP, as well as to examine the viability of BIP in attracting an intra-firm division of labor through a functional and spatial differentiation of value chain activities. The competitive advantage to the firms should lie in their ability to capture lower costs, differentiation of value activities, and economies of scale via a spatial specialization of production into BIP. Summary information on the case firms are set out in Table 2.

TABLE 2
Case-Study Firms

Company	Country	Type of Electronics Product Manufactured
A	Japan	Automotive Electrical Parts
B	Singapore	Printed Circuit Boards
C	France	Consumer Electronics
D	United States	Disk Drives
E	Japan	Consumer Electronics

Company A: Automotive Electrical Parts

A major Japanese manufacturer of electric wires, cables, brake products, and electronics and telecommunications products, Company A produces a range of automotive products and peripherals in factories in Japan, UK, USA, Brazil, India, Singapore, Jakarta, and more recently, Batam. Company A's activities, such as wiring production, typically involve substantial manual operations and are therefore deemed as labor intensive. The company has been operating in Singapore since the 1970s, and has since expanded its operations in Batam. In December 1990, it established a subsidiary to manufacture wiring harnesses on Batam, of which the factory had 600 employees.

The company's major clients are Japanese automobile manufacturers. Most of the sourcing is done in Japan as product specifications are assigned at its headquarters in Japan. The disengagement of the Singapore operations from Batam within the firm's value chain is further established when its Singapore facility provided insignificant numbers of plastic connectors for assembly operations in Batam, and most of the final assembly and packaging is done in Batam. The resultant effect is a limited integration of value chain activities between Batam and Singapore. According to the company, the inclination towards its Batam operations is premised on the fact that low-cost labor is scarce in Japan; hence, Batam's low-cost labor is attractive. In addition, the growing presence of Japanese automobile manufacturers in Southeast Asia and the region's potential for electrical automotive parts serve as an extra impetus for its Batam facility. Other incentives include the Japanese government's assistance in employee training and encouragement of the Singapore government to move their labor intensive operations to Batam.

Company B: Printed Circuit Boards

Company B is a Singapore multinational with its primary activities in steel production. Besides conventional purposes of integrating workflow processes, its headquarters in Singapore doubles up as a hub for technological evaluations and pilot production runs for prototypes. The company has a subsidiary in electronics which assembles printed circuit boards for OEM clients; and its production plants in Penang (Malaysia) and Batam complements its Singapore facility.

Company B has relocated its labor intensive activities to Batam since 1991. Materials are first sourced in Singapore, thereafter products are scheduled to be returned to Singapore after assembly in Batam. The Batam plant contributes to 10% of electronics sales of the firm. The operations director, who is in charge of the Batam plant, indicated that the strategic maneuver was to take advantage of the abundant supply of cheaper labor relative to Singapore. Low-cost labor has enabled the company to operate a spatial division of labor in terms of its production technology. However, the Singapore facilities exploit a higher level of technology in operations; the more advanced Surface Mount technology (SMT) is used in Singapore while Batam uses the Pin-Through-Hole (PTH) technology.

Company C: Consumer Electronics

Company C is one of the world's largest consumer electronics companies and has its production facilities located in various parts of Asia. The French multinational has located its regional

headquarters in Singapore to function as a centre for research and development, co-ordination and overall management. The company has set up consumer electronics manufacturing facilities in Singapore since the mid-1970s. With component supplies from its Singapore facility, the company also assembles audio products in its Johor plant which was subsequently established in 1984. The plant is engaged in labor-intensive production of sub-assemblies and tuners for televisions. Assembly operations are carried out in Batam, with the Singapore facility acting as a supplier for components. However, final assembly is still done in Singapore after the Batam plant has completed the assembly of components.

Batam was chosen as a production location for labor intensive manual operations that use less high-tech production equipment and are difficult to automate, as indicated by the regional manager. Furthermore, additional push-factors such as lower labor costs and free port status cemented the company's preference for Batam. Lastly, like the other two companies mentioned in the earlier cases, the Singapore government was the key driving force for the company to relocate its labor intensive operations to Batam.

Company D: Disk Drives

With its base in California, Company D is a disk drive manufacturer producing for OEMs and distributors. It has manufacturing operations in California and Bangkok, and sub-contractors in Johor. It has established a PCB assembly plant in Singapore since 1982. In 1989, a subsequent plant was built; and 1984 witnessed the company's launch of a research and development centre.

When the Batam facility was established in September 1991, the company employed 450 workers. The main function of the Batam plant was to service, upgrade and repair printed circuit boards. The Singapore facility ships all parts and printed circuit boards to the Batam plant. After which, these components are shipped back to Singapore where they are tested and installed in disc drives. The more labor intensive operations are conducted in Batam, Bangkok and Johor while the higher skilled operations and those involving more advanced technology are conducted in Singapore. The Batam facility therefore supports the assembly operations in the Singapore plants.

Company E: Consumer Electronics

Company E is a leading consumer electronics maker with audio equipment, television and VCRs as mainstays. It is renowned for producing high quality goods, carrying out advanced R&D, and providing reliable services. Based in Japan, it ventured overseas in the early 1970s to start direct production in lower cost environments. But, until the 1980s the focus was only on the United States and Europe. However, the growth in the Asian economies and an appreciating yen in the mid-1980s prompted the company to transfer its manufacturing facilities to Asian countries. Its first overseas manufacturing subsidiary, a centre for making precision components, was started in Singapore in 1987 to produce and supply not only precision components worldwide, but also production technology for its other plants in Asia. In 1991, the company commenced manufacturing operations at BIP to support its operational activities in Singapore. It presently has plants in South Korea, Taiwan, Singapore, Malaysia, Thailand, and Indonesia.

While the company's headquarters in Japan is still the nerve centre of its Asian production operations, its Singapore office was granted Overseas Headquarters (OHQ) status in 1987, and acts primarily as a regional sales and procurement office for the company. The company's investments in Singapore and Batam is not only motivated by cost alone but rather, is a general strategy of transferring production out of Japan to Asian countries for countering the high yen and market potential offered by this region. As Japan has been under great pressure from the West to correct the trade imbalance, production and export of manufactures from a region like ASEAN would help Japan to circumvent the requirements for the then-GSP eligibility.

Discussion

The case-study firms had developed a regional division of labor within which the Singapore and Batam operations each acted as centers for certain value chain activities, according to their respective competitive advantages. In all five cases, Singapore served as a base for management and marketing operations in the region and, to varying degrees, for research and development.

The results of our questionnaire survey indicated that, by popular ranking, competitive labor costs, quality infrastructure, political commitment from the Singapore government and proximity to Singapore were the major considerations for the tenants' decision to locate in BIP. The survey results are substantiated by our in-depth case studies. Indeed, for all companies interviewed, lower labor cost and greater availability of labor compared to Singapore were key elements in their decision to locate some of their production operations in Batam. In terms of value chain activity, it is in "Operations" that the Batam facilities are of competitive advantage to the companies. Within "Operations" the functional differentiation of value chain activity intra-firm, is that the labor intensive operations, using low cost, low skilled and abundant labor sources, are located in Batam. Managers who were interviewed cited labor cost and labor availability as primary reasons for relocation of labor-intensive operations within the value chain to Batam. However, all companies found infrastructure costs such as transport relatively uncompetitive, despite the institutional and infrastructural framework put in place in Batam by the two national partners, Indonesia and Singapore, and by the firms and institutions operating the industrial estates. Nevertheless, each of the five companies believed that the savings in labor costs allowed them to capture competitive advantage in operations. All of the companies studied sourced components from outside Batam; generally either from Singapore, in the case of Companies B, C, D and E, or in the case of Company A, from Japan. Finished or semi-finished products were either subsequently reshipped to Singapore for final assembly or packaged and shipped directly out of Batam. The case-study firms have not cultivated the development of local component or contracting sources.

However, these companies did not capture competitive advantage in the labor chain solely through reduced labor costs. Another, albeit related element of the functional differentiation is that, the relocation of labor-intensive operations to Batam is coupled with lower investments and therefore greater savings in production technology. This was due to a variety of factors: The difficulty in automating those processes; the use of lower cost labor as an alternative to technological investment; the low skill and educational levels of the labor force; maintenance and upgrading of the more automated operations in Singapore. In the case of Japanese companies, it was also to soften the effects of a rising yen and to circumvent the restrictive trade policies imposed by the then-

GSP policy. In this sense, the functional and spatial differentiation of the value chain segment “Operations” was used by companies having production operations both in Singapore and Batam to reduce costs both in terms of labor and in technology investment. Investment in high technology was generally reserved for operations in Singapore. In short, the search for cost advantages has led to a spatial fragmentation of the production process, and MNCs breaking their value-added chains across national borders to maximize the comparative advantages of the neighboring economies.

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

The five most frequently cited labor constraints confronting the BIP tenants were the shortage of semi-skilled and skilled labor, high and/or rising labor costs, shortage of R&D personnel for product/ process development, low labor productivity, as well as labor absenteeism respectively. On labor shortages, 79% of the respondents identified shortage of skilled labor among the major constraints on their manufacturing operations in BIP while 33% reported significant problems recruiting R&D personnel. High and/or rising labor costs posed serious problems for 50% of firms while 26% and 10% of the firms complained of low labor productivity and labor absenteeism respectively. Difficulties in getting quality support services, procuring materials and components locally, acquiring/adapting essential technologies and the high and/or rising overhead and material costs, by rank ordering, were the most frequent cited problems faced, highlighted by: 72%, 33%, 31%, 54%, 13% of the respondents respectively. 46% of the respondents cited “impact of government policies/regulations” as the major problem confronting their operations in BIP. Only 13%, 5%, 3% and 5% of them felt that competition from overseas competitors and from Singapore-based companies, and the protectionistic barriers in other countries amongst the problems faced (Yeoh, Lim & Kwan, forthcoming, 2003).

Issues and Challenges

Thus far, the Park has offered little support for activities that fall outside the domain of “Operations” in the value chain. While the Park has provided crucial links within the value-added chain that give tenant-firms a competitive advantage, emerging constraints on the flip side of the desired strategic fit – the host country’s ability to continue provide the requisite comparative advantages – have emerged (Yeoh, et al., 2003a; 2003b).

Lack of Tenant Diversity

The initial promotion of BIP had talked about it making a significant contribution to the upgrading of the Singapore economy by managing the outflow of MNC investment and stimulating Singapore’s role as a regional headquarters. In reality, it was the Japanese who were most positive towards the concept, illustrated by the fact that the Park has since become a Japanese electronics manufacturing enclave. Almost 50 percent of the tenants are Japanese companies, a nationality profile that has been pronounced from the outset.

The huge inflow of Japanese companies into BIP is not surprising, given the appreciating yen and urge to circumvent the then-GSP trade policies by locating ex-Japan. Strong marketing efforts specifically targeting the Japanese had also contributed to the influx of Japanese companies. Though vulnerability to a withdrawal of Japanese investments and the limited linkages to the Singapore economy are issues worth exploring, a more immediate concern would be the huge concentration of electronic firms in BIP. While creating a niche is commendable, the “industry cluster” strategy hedges the success of BIP to the highly volatile electronics sector, and issues such as long-term sustainability of the Park adopting such a cluster strategy arises.

Intricacies of Social Challenges

BIP’s development strategy envisaged a self-contained environment, with minimal dependency on the surrounding environment. In reality, it is not so. The island’s reputation as a boom economy has overwhelmed Batam. Almost half of the island’s population, which has more than tripled since 1990, are new migrants living in illegal squatter housing, and 50,000 illegal houses are reportedly scattered throughout the island (The Straits Times, October 6, 2001). Attracted by their lower cost and avoidance of accommodation responsibilities, around half of BIP’s labor force now resides outside the Park. This external labor supply has, however, introduced into the Park the tensions and social problems of squatter settlements. There is much pressure to maintain, or even increase the investment value of BIP, without a shift of resources to meet the needs of the local community. While social challenges remain outside the domain of BIP’s management, the Park strives to educate its workers on social norms through professional social counselors for a better industrial community.

Heightened Competition

The mushrooming of 13 other industrial parks, some even within close proximity, has weakened the Park’s competitiveness. Competitor parks that are backed by prominent Indonesian politicians have been rapidly developing to match BIP standards. Panbil Industrial Park, for instance, is located directly opposite BIP, and offers similar factories at competitive rentals. The premium placed on the Park’s one-stop support service, and self-sufficient operating environment, is increasingly called into question.

The Park’s management recognizes that competition is inevitable. Rather than engaging in a price war, it prefers to adjust its rates to better reflect the market situations, while at the same time differentiating itself from its competitors by catering to higher value-added activities. The Park regards its competitors as essential components of a “living system” in which all entities within the system constantly adapt to their dynamic environment and are synergistically integrated. Co-existence must be established in BIP to augment a positive image of the Riau Islands as an investment haven. In addition, competitors are viewed as an imperative to the long-term attractiveness of BIP. There are plans to create new initiatives for the Park’s tenants, such as offering broadband services ahead of its competitors, and providing supply-chain management solutions for its tenants. The ‘industry cluster’ strategy, or cost focus (Porter, 1985) may also attract a niche segment of manufacturers which will be more willing to pay a premium for the Park’s services.

Competition is however, not limited to within Indonesia. With increasing globalization, competition now extends beyond geographical boundaries. Companies which want to relocate will also consider similar low-cost enclaves in China, Vietnam, and India. Nevertheless, BIP continues to maintain its competitive advantage by providing better access to global markets through Singapore's aggressive Free-Trade Agreement arrangements with other countries and better intellectual property rights regulation to protect the manufacturers.

Vagaries of Political 'Patronage'

Ownership changes have added uncertainties to the Park's operating environment. The Park's privileged access to senior politicians and policy-makers has been diminished with the 'apparent' change of ownership in BIP. The Indonesian Bank Restructuring Agency has reportedly offered to sell the Salim Group's stakes in all the Riau projects – estimated to be worth S\$500 million – in a packaged deal (The Business Times, August 28, 2001). With the three main stakeholders now being SCI, Ascendas and the Indonesian government, it is evident that further restructuring has taken place. The Park's reputation as an investment haven has not been left unscathed by political developments in the aftermath of the Asian financial crisis, the September 11 attacks and more recently; the economic toll that the SARS virus had brought about to the world, in particular, ASEAN nations. Between January and August 2001, BIDA had only reported 63 new projects worth US\$325 million that were attracted to the island.

While political uncertainties may have affected the park's attractiveness, the positive brand equity of "Batamindo" built up by BIP has seen its management take up key leadership positions steering the future of Batam island. With the high profile, the management is able to gather feedback from the tenants to the authorities in order to create a better environment for the investors. A good example is the low minimum wage increase of only 5% in Batam as a result of its representation to the relevant authorities. With an established track record, the management of BIP can continue to play an important role in shaping the industrial character of Batam island and plough more economic benefits back to the Singapore economy.

Conclusion

The case studies point to a complex regulatory environment for investors, as they have to deal more intensively with the local administration. The economic 'theorization' that underscores this transborder initiative has been overshadowed by the political nuances that radiate from the host environment and overtaken by the economic realities of Asia's new 'powerhouses' – Vietnam, India and China. With the signing of the US-Singapore Free Trade Agreement in May 2003, third party economies like Indonesia could benefit from the Integrated Sourcing Initiative.

Despite the significant issues and challenges facing the park today, Batam continues to be one of the most promising investment enclaves in the region. In fact, the intense competition amongst industrial parks for investors' dollars is an indication of the attractiveness of Batam as a location for investment, and enhances the Singapore government's long-term vision of the success of the Singapore-Riau twinning strategy.

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