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The “Growth Triangle” and the Labor Market of Japanese-Affiliated Enterprises on Batam Island

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One of my research subjects is to cross-nationally compare the labor markets at the forefront of development in Asia. This paper examines the structure of the labor market on Batam Island, based on the survey data of Japanese-affiliated enterprise. The development of Batam has proceeded very rapidly under the Singapore-centered “Growth Triangle” concept. The formations of the multi-layered labor markets in this region have shown unique evolutions with interactive regulation between the peculiar geopolitical factors and the market principles that pervade with an impact mainly from foreign direct investments.

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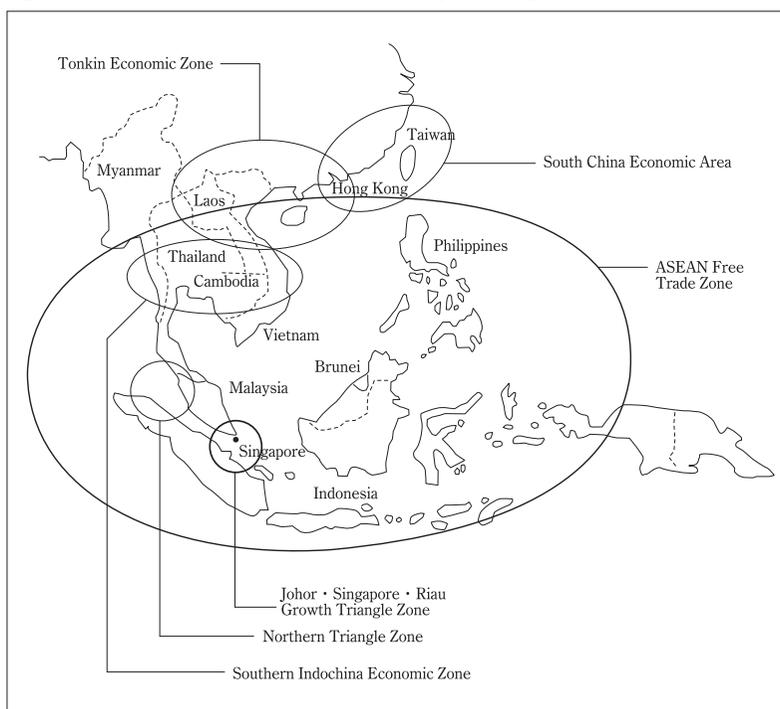
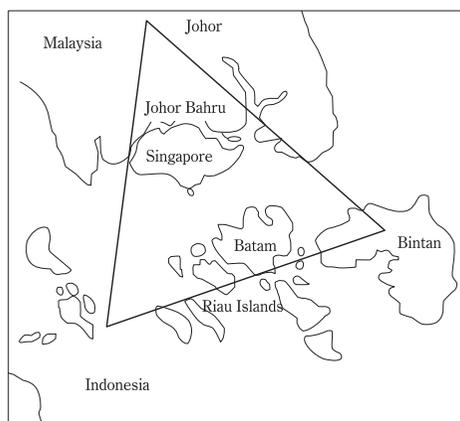
1. Preface

This paper is a sequel to an earlier study of 1999 that analyzed the labor market of Batam Island (Indonesia). On the basis of recent research data collected in March 2011, the author aims to investigate both the recent phenomenon of the “Growth Triangle” as well as current changes in the development of Batam Island. Our 2011 aim is the same as that of our previous investigation of 1999: to consider the contribution to the local economy of Japanese-affiliated enterprises. Having time to investigate only a limited number of cases, the author was able to isolate the leading characteristics of the recent changes in the internal labor market of the industrial region of Batam Island.

In the pages that follow, the author will, first of all, offer an outline of the concept known as the “Growth Triangle” and discuss how the development of Batam Island is progressing, after which he will examine the changes in the labor market of Batam Island by reviewing case studies of Japanese-Affiliated industries (refer to Figure 1, Figure 2 when necessary).

2. The “Growth Triangle” Concept

Since the mid-1980s, the protocol set up for the international division of labor adopted by the countries of Eastern Asia — an initiative led by the developed countries — has entered a new phase, with a rapid growth of high-tech industries backed up by an information infrastructure and the construction of an advanced enterprise intensive production system and supported by a concept whereby various levels of the region’s economic zones supplement the process of

Figure 1. Southeast Asia, Main Concept of Regional Economic Zones**Figure 2. Johor-Singapore-Riau, the “Growth Triangle”**

international economic globalization. The idea for “The Growth Triangle” was a concept initiated by one of the region’s economic zones with the aim of advancing the business interests of the developed-affiliated enterprises of Southeast Asia, in concert with the Singaporean regional development strategy of urbanizing Singapore as a hub city. The initial idea for the concept originated among the three countries that view Singapore as the center of a triangle that straddles Johor State in Malaysia and Riau Province in Indonesia. Although only Singapore and Indonesia reached an agreement at government level, the development of Riau Province,

especially what is now known as Batam Island Industrial Park, has proceeded very rapidly.

Singapore, drawing on the development concept, made it a fundamental strategy to turn itself into an Asian hub by industrializing and urbanizing its financial and high-tech industries. At the same time, since it is characterized as a city-state with a small population and limited resources of land and labor power, Singapore has adopted the regional development strategy in order to establish itself as an independent entity in terms of finance and high technology, while simultaneously involving its closest neighbors in the project. In other words, the aim of Singapore is to foster the international division of labor within the regional 'triangle', itself specializing as the center of finance, information and business management, employing highly educated workers while shifting labor-intensive industries to the outlying countries where land price and wages are low; simultaneously, it seeks to encourage the growth of the labor intensive industries not only of Singaporean origin and ownership but also of developed-country affiliated enterprises.

It was the Indonesian government that positively responded to the Singaporean government's proposal. After a meeting in October of 1989 between the then Singaporean Prime Minister Lee Kwan Yew and the then Indonesian President Suharto, the Senior Minister of Singapore Goh Chok Tong announced the details of the agreed-upon proposal in December of the same year. Batam Island was singled out as the first site where the proposals could be actually developed on the ground and work began immediately after the declaration of intent had been formulated and signed. The plan met the aims of both Indonesia and Singapore, since Indonesia faced the serious problem of finding employment for an overwhelming excess of labor while Singapore was anxious to shift its labor-intensive industries to neighboring countries where the price of land and the cost of wages were both low.

Under the inter-governmental agreement, Singapore and Indonesia prepared an investment program to provide 100% of the foreign capital for the advancement of the enterprises and agreed "not to nationalize the advanced enterprises" since freedom from state control would be beneficial not only to Singaporean enterprises but also to the multi-national enterprises that were anxious to relocate their production centers. This multi-layered international division of labor has enabled both the developed-countries' and the Singaporean multi-national enterprises to establish themselves successfully on Batam Island.

Before the "Triangle" was conceived, economic achievements by direct investment and labor transfer between Singapore and Johor state, Malaysia, had to some extent been limited, while, needless to say, there had been very little economic exchange between Johor state of Malaysia and Riau province of Indonesia. Since the concept of "The Triangle" and the industrial agreements based upon it have led to cooperation between Singapore and Indonesia at the level of the national governments, we may therefore speak of Singapore as the cornerstone of "the Triangle" or as the keystone of the bridge that was built to connect the signatories to the agreement, a situation that has remained fundamentally unchanged to this day.

3. The Development of Batam Island

The development of Batam Island only really began after the official announcement of the governmental agreement between Singapore and Indonesia in 1989, or, more precisely, from the establishment by both countries in January of 1990 of a joint venture company to be set up in Batamindo Industrial Park. The development entities associated with the Batam Island project included the Ministry of Finance-affiliated enterprise, STIC (Singapore Technologies Industrial Corporation Ltd.) and the Singapore Ministry of Trade and Industry-affiliated enterprise, JEE (Jurong Environmental Engineering Pte. Ltd.), while the Salim Group from Indonesia, the largest Chinese conglomerate, contributed capital. Since STIC is substantially engaged in marketing, there can be no doubt that the Batam Island development is a Singapore-initiated development project.

On the other hand, the Indonesian government's concept of Batam Island development first emerged with the establishment of the Batan Industrial Development Authority in 1971, though it was not until 1989 that the actual development of the island began as a consequence of the joint development agreement with Singapore. The commencement ceremony at Batam Industrial Park was held in February 1990, and, in April of the same year, Sumitomo Wiring System Co. signed a contract as its first tenant.

Until the early 1970s, Batam was a fisherman's island located 20 kilometers south of Singapore with a population of around 7,000 and a total land area of 415 square kilometers (around two-thirds the size of Singapore). Since the construction of the industrial parks in the early 1990s, Batam Island has been rapidly transformed and now boasts a population of 1 million, while by 2010 the population of the labor force had swollen to 250,000. So far, 27 industrial parks have been constructed, and Batamindo Industrial Park (in Muka Kuningan) has been completely furnished with infrastructure facilities, while joint projects with Singapore have been intensively pursued.

Table 1 shows the outline of the industrial parks at the site area, ranked from first to fifth. Above all, Table 1 shows the vast scale of Batamindo, surpassing as it does other sites in the numbers of both plants and laborers. Table 2 shows the change of the numbers of the tenants of the industrial enterprises by countries and areas. Internal information provided by SPM (Sembcorp Parks Management Business Agency in charge of marketing in Batamindo Industrial

Table 1. Main Industrial Parks in Batam Island

	Start of Operation	Developed Area	Number of Factories	Number of Tenant Companies	Number of Workers
1.Batamindo	1990	320	238	73	56,000
2.Panbil	2001	103	76	15	3,700
3.Latrade	2000	60	20	11	8,800
4.Tunas	1999	38	66	35	7,600
5.Cammo	1995	18	44	29	3,100

Source: Internal Document of Sembcorp Parks Management

Table 2. Batamindo Industrial Park: Occupancy Conditions by Nation/Region

	1998		2010	
		%		%
Japan	43	51.8	33	45.2
Singapore	23	27.7	19	26.0
Europe	10	12.0	8	11.0
USA	4	4.8	8	11.0
Others	3	3.6	5	6.8
TOTAL	83	100.0	73	100.0

Source: Internal Document of STIC

Table 3. Batamindo Industrial Park: Classification of Enterprises by Industry

Industry (Classified by Major Products)	1999		2010	
		%		%
Electric/Electronic	51	61.4	35	47.9
Precise Devises	14	16.9	12	16.4
Plastic	7	8.4	8	10.9
Medical Products	2	2.4	3	4.1
Others	9	10.8	15	20.5
TOTAL	83	100.0	73	100.0

Source: Internal Document of STIC

Park) indicates that the number of tenant enterprises declined from the peak of 91 in 2001, while the tenant's occupation ratio of 238 plants within the industrial parks remains almost stable at around 86%, from which the author estimates that the scale per plant has been expanding (in 2010 the number of the employees was 56,000). From the beginning of the establishment of Batamindo Industrial Park, the tenants of high-tech related enterprises were given priority to move in, a state of affairs that up to the present has not changed. Table 3 indicates the transition of the tenant enterprises in Batamindo by categories of business.

The enterprises that moved into Batamindo from the beginning of the construction of Batamindo Industrial Park in 1990 and that were in principle independent, with 100% of foreign capital, were awarded various favorable conditions, including the possibility of being able to start a business with minimal initial investment, thanks to the plant rental system, and to the simplification of tariff procedures based on the area's status as a bonded zone, in addition to such common preferential measures as exemption from the SGS inspections conducted at other industrial parks in Indonesia (the batch processing of tariffs at seaport/airport on Batam Island is simple and convenient for companies), as well as the tariff-free imports of raw material on the condition that the products would be re-exported. In October 2007, the Indonesian government designated BBK (Batam, Bintan, and Karimum Island of Riau Province) a Free Trade Zone (FTZ) and totally abolished import tariffs, custom duties, consumption tax, value added tax and luxury tax,

while subsequently extending beneficial treatment in the field of taxes overall.¹⁾ Severe competition amongst Asian countries (especially China, Vietnam, and India) to attract foreign capital has led to various beneficial measures being taken to maintain the management of the industrial parks. As a result, the working ratio of industrial parks, as a whole, has not so far fallen. Under such favorable conditions, the tenant enterprises have striven to survive, raising their productivity in order to succeed in such a severely competitive world.

4. Labor Market of Japanese-Affiliated Enterprises

(1) Demand Structure of Labor Force

In this section, we discuss the characteristics of the labor market of Batam Island, taking as our main case a Japanese-affiliated enterprise Company A as an instance of a multinational enterprise. We carried out our investigation of Company A in March 2010, our second investigation since August 1999. The author here pays special attention to the changes in the internal labor market during the 2000s.

Company A, which is a significant maker of computer parts, has developed its overseas business operations, moving a section of the production process from its Saitama plant to Malaysia in 1991. Two years later, however, owing to a labor shortage and escalating labor costs in Malaysia, the company was forced to shift a part of the plant from Malaysia to Batam Island. The company did this because the labor costs in the Batam Island were about one-third those of Malaysia as seen from the perspective of the international wage standard for enterprises of a similar kind. In the 1990s, Company A shifted an important base center of its overseas production to Indonesia and China (Dongguan of Guangdong) and, by the beginning of the 2000s, the ratio of overseas production of Company A to that of its total output exceeded 90%, reducing domestic production in Japan to less than 10%, and only the research development and the production process section of its cutting-edge and high value-added products were retained by the Japanese domestic plants.

When, in 1993, Company A commenced its operations in Batamindo Industrial Park, it established itself as an entity with capital of 1 million of full investment, independent from Japan, leaving only the head office in Singapore. Its main product at Batamindo was the disk drive of personal computers. Although production had grown from 4,400,000 in 1998 to 17,000,000 in 2010, the total amount of sales had decreased from \$271,200,000 in 1998 to \$160,000,000 in 2010, which reflects the severe price competition within the industry. All its products are exported through Singapore, and while the countries to which it exports have changed annually, the majority of its products go to large American

¹⁾ In June, 2006, Indonesian and Singaporean government signed an agreement to establish a special economic zone (SEZ) in BBK (Batam, Bintan, and Kamlin island). Subsequently, both governments proceeded to simplify the investment procedures for BBK and provided infrastructure facilities (tax system, finance, immigration control) to this effect. In October of 2007, the Indonesian government made a decision to designate such industrial integrated zones as Bekasi. Indeed, 11 states and 20 cities were nominated as candidates for inclusion within SEZ (as of March 2011).

Table 4. Composition of Occupations in a Japanese-Affiliated Company in Batam Island

	1999			2011		
	Japanese	Indonesians		Japanese	Indonesians	
		Males	Females		Males	Females
Managers	3	7	-	3	8	1
Technical/Clerical	3	8	1	3	63	36
Line Leaders	-	135	56	-	50	42
Operators (Regular Workers)	-	59	2,287	-	116	468
Temporary Workers	-	-	289	-	34	354
TOTAL	6	209	2,633	6	271	901

Source: Author's Survey (August 1999, March 2011)

high-tech companies; most of its remaining products are re-exported to large Japanese domestic household electric appliance manufacturers.

Table 4 depicts the composition of workers according to their classification. Before the white-collar workers (in charge of clerical, technical and administrative/managerial works) can join the workforce, they need the educational attainments of professional school or junior colleges in order to apply, and, if successful, they are employed as regular workers with a long-term employment guarantee. When we compare the 1999 figures with those of the more recent investigation, we find that the present number of white-collar workers has grown, which indicates the gradual localization of human resources to cultivate an increasing number of white-collar working class laborers, a problem from the early days that needed to be solved.

The administrative/managerial staff explained at the time of investigation in 1999 that in terms of the personnel appraisal of the regular workers the problem (still to be fully solved) was the result of the shift that they needed to make from a Japanese-style seniority system to one of consistent promotion and a regular pay-hike based on the competence evaluation system. The investigation of 2011 confirmed that the competence evaluation system had been adopted and applied once a year for personnel appraisal. The personnel appraisal approach adopts the relative evaluation of three grades, A, B, and C: grade A is allotted to only 10% of the regular workers (competent to propose and accomplish suggestions for improvement); grade B is allotted to 80% (competent to make an improvement proposal); and grade C, 10% (to those who are never late or absent and are capable of performing ordinary manual work). Only the workers who are awarded the A grade are allowed to be placed on the promotion list. Personnel appraisal takes into account a competence evaluation with recommendation from the individual's boss rather than with reference to the term of service. Wages, excluding seniority pay, are therefore based on duty and performance. A drastic merit system has recently been introduced into the methods of personnel appraisal. The administrative/managerial staff explained that this was inevitable as an incentive to motivate the more highly educated local employees.

The on-the-spot factory workers (line leaders and operators) are composed

of the contracted and the temporary workers: both kinds of employment require that the workers should be upper secondary school graduates. The contracted laborers (64% of the factory workers) are employed under a one-year contract extendable to two years in all, renewable only once after that. At the time of the investigation in 1999, the contract was, in principle, for two years from the date of employment, and it was possible, at the laborer's request, to extend it for one more year after the renewal of the contract, thus making it three years altogether. Since the Indonesian New Labor Law of 2003 was passed, however, the rule has changed and the regulations now require that such temporary laborers must be discharged after two years.²⁾ The New Law stipulates that if enterprises employ laborers for more than 3 years, then they must treat them as regular laborers with a long-term employment guarantee. Before the new labor law was enacted, however, the practice of a two-year or, at most, a three-year employment period had become common at Batam Island. Factory workers, mostly young women, were recruited from all over Indonesia, and were engaged, with minimum local wages, in simple tasks of manual labor in the mass production processes of high-tech products. Only in exceptional cases does an extremely competent factory laborer of the contract worker class get an opportunity for promotion to the class of regular workers, who constitute less, in fact, than 1% of all the factory workers. The workers recruited from the temporary employment agencies of Batam Island (36% of the factory workers) are employed for a much shorter period, from one month to a few months at the longest. Although their educational achievements are the same as the high school graduate contract workers, and although their line work is no different from that of the contract workers, they are paid only minimum and overtime wages, and they receive none of the public welfare benefits that are guaranteed to the contract workers, such benefits as Jamsostek, an old-age pension, workmen's accident compensation insurance, mortality life insurance, and health insurance. This is because the employment of temporary/external workers is in the main adjusted to meet the demands of the short-term fluctuations of labor force needs.

The administrative/managerial staff told us that owing to the intensively competitive environment that has prevailed since the economic crisis of 1997 and because of the fluctuations of demand and supply and the need to match the speed with which the models change, the enterprises had increased the number of temporary workers and shortened the employment period of the contract workers. Three years ago, however, as a countermeasure to the fluctuations of demand and supply and to reduce personnel costs, Company A reduced the total number of factory workers, outsourcing part of its production process to a Singaporean Company in Batamindo Industrial Park. The number of laborers employed by

²⁾ A new Labor Law was passed in 2003 to revise and systematize various labor regulations as legislated by order of the President, and a number of innovative regulations to protect the workers' rights were incorporated in the new law, covering conditions of employment and discharge, retirement allowances and so on. This provoked strong opposition from a group of managers, however, and in answer to the managers' objections, the Indonesian government discussed revision of the law, but met strong resistance from the workers' union. Although the law was partially revised by order of the President and the Labor Minister, a substantial version of the original was passed.

Company A reached its peak of 3,400 in 2006 and afterwards about a half of the operators were gradually shifted to subcontractors of the electronics part product maker, supported by Singaporean capital. Subsequently, Company A continued to discharge its factory workers and at the time of the most recent investigation their numbers had declined to about 1,000.

When we seek to determine the characteristics of the class structure of Company A by occupation, we find an explicit difference between the highly-educated white-collar workers engaged in clerical, technical and management roles and the blue-collar high school graduates engaged on the production site, primarily in the conditions of the service period and skill formation imposed by the segmented internal labor market. In principle, only the regular staff need to acquire the skills necessary for promotion and pay-hikes since the factory workers — mostly young women who are replaced every two years and are engaged in simple, unskilled manual labor — are rarely required to learn the more advanced skills. We learned from further interviews with the staff that because basic factory labor skills can be acquired after only about 3 to 10 days of on-the-job training and yield no disparity in quality and quantity of work, the factory workers are paid the standard minimum wage. The policy of replacing temporary workers every six months and the minimum wages that they are paid without any chance of a pay increase has thus led to the drastic reduction in the costs of labor power.³⁾

Let us now examine the method of recruiting. Since the company can rely on the cooperation of Tunaskarya (Employment Agency , a member company of the Salim Group) in Jakarta and on advertisements in the newspapers, it is easy to recruit regular working staff and contract laborers from outside Batam Island. Tunaskarya takes care of the initial recruitment procedures, at which time the listed applicants are given a general academic and medical examination, and, if selected, are asked to attend a job interview. Members of the company's administrative staff travel from Batam Island for the interviews to decide on which candidates to choose for employment. The company says that thanks to Tunaskarya and the newspaper advertisements they have as many ten applicants for every vacancy. Since, even in Indonesia, job shortage is a very serious problem for the highly educated, we rarely find any job transfer during the period of contract, even amongst short-term factory workers. Figures show that the annual rate of those leaving their place of employment before the expiration of their contract is less than 1%.

When Batamindo Industrial Park first opened its gates, it recruited labor power from all over Indonesia. Recently, a large number of the laborers who have completed their 2-year contract and are unemployed remain on Batam Island in search of new employment. Although they wish to be re-employed as contract laborers, they simultaneously apply to the agency for temporary workers. This has caused the ratio of temporary laborers to rise, as with Company A.⁴⁾ Since

³⁾ Overtime work (not prescribed labor) is regulated to not more than 3 hours a day, to not more than 14 hours a week, as the only permitted additions to the prescribed working hours of 40 hours a week (Article 7, Item 2 of Labor Law).

⁴⁾ 60% to 70% of the total number of the workers are said to be on temporary contract. Once the

Batam Island has a relatively higher minimum wage than other provinces of Indonesia, most factory laborers who have immigrated to Batam Island hope to transfer to a job there. Indeed, the minimum wage of workers on Batam Island has for a long time been ranked as the highest in Indonesia. Although after the minimum wage was revised in 2011 and Jakarta took the top place at 1,290,000 Rupia a month, Batam Island is still one of those conglomerates that pay the highest minimum wage.

We may easily note a wage disparity by positions as a consequence of the segmented internal labor market, and Table 5 indicates the average wage by positions, where we can clearly observe the wage disparity between the regular staff who are promoted through the process of personnel appraisal and the factory workers under short-term employment. Although accurate internal wage data for each level of the regular positions is unobtainable, we estimate on the basis not of seniority but of performance pay that the wage disparity is very large. Since the beginning of the 21st century, the average minimum wage of Batam Island has risen annually by around 10%. At the time of the revision in early 2011, the minimum wage was set at 1,180,000 Rupia (equal to ¥11,800) a month, which is the same as the basic pay of the temporary worker. The factory workers who are not distinguished in the wage scale by position and skill have no means of increasing their allowance except by working overtime. The new Labor Act in 2003 restricted overtime work to 14 hours a week in addition to the ordinary work of 40 hours a week (prescribed work). The staff told us that the factory laborers demand to work overtime for as long as they can.

(2) Mechanism of Manpower Supply

We look now at the characteristics of the manpower supply.

Table 6 presents the composition by occupation of the workers' families of origin (sample survey), categorized according to their parents' occupations. At the time of the investigation in 1999, the ratio of workers whose parents were civil servants (where, that is, the head of the household was in public service) was very high, typical of the households of those days with higher educational opportunities

Table 5. Average Wages (Monthly) by Position in a Japanese-affiliated Company in Batam Island

	Basic Pay	Allowances/Overtime
Managers	12,500,000	1,300,000
Technical	6,000,000	900,000
Clerical	4,700,000	700,000
Regular Factory Workers	1,500,000	300,000
Temporary Workers	1,180,000	200,000

Source: Author's Survey (March 2011)

Note: Exchange Rate at the Time of Survey: 1 yen = 100 rupia

new labor law of 2003 had legalized the temporary laborer system (a regulation to entrust businesses with its management), the numbers of temporary laborers increased very rapidly.

Table 6. Compositions by Occupation of Worker's Family of Origin in a Japanese-affiliated Company in Batam Island

	1999		2011			
		%	Production Worker	Clerical/ Technical/ Management	TOTAL	%
Farm Management	6	11.8	16	1	17	20.2
Farm Laborer	1	2.0	13	3	16	19.0
Plant Laborer	-	-	3	-	3	3.6
Clerical/Technical/ Managerial	4	7.8	1	1	2	2.3
Artisan	-	-	-	1	1	1.2
Merchant	6	11.8	8	3	11	13.1
Self-employed	11	21.6	11	3	14	16.7
Government Employee (Administrative)	17	33.3	4	6	10	11.9
Soldier	5	9.8	1	1	2	2.3
Teacher	1	2.0	1	-	1	1.2
Others	-	-	2	5	7	8.3
TOTAL	51	100.0	60	24	84	100.0

Source: Author's Survey (March 2011)

Table 7. Previous Work Site of Workers in a Japanese-affiliated Company in Batam Island

	1999		2011			
		%	Production Worker	Clerical/ Technical/ Management	TOTAL	%
Batam Island	14	34.1	24	5	29	55.8
Jakarta	11	26.8	2	1	3	5.8
West Java	8	19.5	2	-	2	3.8
Central Java	2	4.9	8	3	11	21.2
East Java	-	-	1	1	2	3.8
Sumatra	5	12.2	2	2	4	7.7
Other	1	2.4	1	-	1	1.9
Total	41	100.0	40	12	52	100.0

Source: Author's Survey (August 1999, March 2011)

and attainments. This time, however, we found a very high ratio among parents who were farmers and the self-employed, which reflects the growth of a more highly educated group of laborers amongst social classes that might not previously have aspired to higher education.

Our research data on the location of a worker's previous job (Table 7, sample investigation) revealed a remarkably high ratio for Batam Island. We have already said that a huge number of the workers who come from all over the country are re-employed by companies located on the same island. When we classify by occupations, we find the same tendency even amongst the class of the white-collar workers who have been guaranteed long-term employment, while the production laborers under short-term employment contracts are just as likely to transfer a job within the island than look for work elsewhere. As for the workers' experience of transfer between jobs, 50% of the regular workers in the production class experienced a job transfer, while the figure for irregular workers

was 72%. Workers on the production lines who are unable to achieve technical skill owing to their short-term employment and the simple manual labor they perform and because the island's minimum wage is higher than that of the other states, are always on the move around Batam Island, seeking for new employment.

We consider finally the local workers' evaluation of the Japanese-affiliated companies. Table 8 indicates the superior points of Japanese-affiliated companies in comparison with other foreign-affiliated enterprises (sample investigation, including replies to multiple choice enquiries). While the regular and production workers differ slightly in their estimation of the basic wage, they both consider that it is low, although the production workers look forward to enrolling in a welfare program and receiving on-the-job group training. Since the company has introduced a promotion and pay-rise system as well as instituting severe assessment protocols to appraise and evaluate the competence of the regular staff, the subsequent mass appraisal and evaluation of personnel management and the seniority system that is a characteristic feature of the on-the-job conduct of Japanese-affiliated enterprises is also low.

So far, we have investigated the employment characteristics of companies located in Batamindo Industrial Park, taking as our example the case of Japanese-affiliated enterprise Company A. Our investigation of 2011 shows no indication of any large or fundamental change from the situation recorded in 1999 in the characteristics of the stratification of the internal labor market and the formation of the quality and quantity of labor power.

The fundamental characteristics are as follows:

- ① The segmentation of the internal labor market is distinctively classified as between the regular staff and the production worker in terms of employment requirements, continuation of service, and skill formation;
- ② An extreme wage disparity, stratification of educational background, superior treatment and competence management as between the regular laborers and the short-term service conditions and low wages of the production laborers, in particular the unstable employment conditions of the temporary laborers situated at the bottom of the ladder;
- ③ The adaptation of the Japanese-style management and production system to the regional laborers' sense of labor.

We have also observed the following changes: 1. A drastic cost reduction brought about by much shortened employment period for the production workers and the outsourcing of the production section; 2. The strata of workers with higher educational qualifications has been regionally extended to include that of farming and metropolitan self-employed households; 3. The mobility of workers within Batam Island itself as well as labor power procurement from the whole of Indonesia.

**Table 8. Survey of Employee Attitude on Working
for a Japanese-affiliated Company on Batam Island
(Sample Survey, Multiple Answers)**

	Production Worker	Clerical/ Technical/ Management	TOTAL	Composition Ratio (%)	Proportion of Persons Who Answered “Yes” to the Total (84 Persons) (%)
① Possible Long-term Employment	8	10	18	8.2	21.4
② High Basic Pay	6	3	9	4.1	10.7
③ Adequate Allowances	23	12	35	15.9	41.7
④ Adequate Welfare Services	26	12	38	17.3	45.2
⑤ Quick Acquisition of Professional Skills	14	4	18	8.2	21.4
⑥ Seniority Appraisal System	1	-	1	0.5	1.2
⑦ Working in Groups	22	9	31	14.1	36.9
⑧ Possible Experience in Different Kinds of Works	19	8	27	12.3	32.1
⑨ Useful QC Circle	24	3	27	12.3	32.1
⑩ Stable Relations Between Labor and Management	12	4	16	7.3	19.0
TOTAL	155	65	220	100.0	-

Source: Author’s Survey (August 1999, March 2011)

5. Summary... the Labor Market in the “Extended Metropolitan Regions”

We here summarize our discussion of the concept of the regional economic zone with Singapore at the core and the specific characteristics of the regional labor market as that concept has been put into practice.

Since the 1990s, both large and small regional economic zone concepts have evolved in Southeast Asia in response to the effects of economic globalization. The Singapore-centered “Growth Triangle” has attracted considerable attention as one particular economic contribution to the overall concept of regional economic zones. It has succeeded in achieving substantial progress, especially in Batam Island, where the progress has been remarkable.

“The Growth Triangle” can be regarded as a version of the concept of “The Extended Metropolitan Regions (EMR)”, with the city-state Singapore as its hub. Since the 1990s, each metropolis (or mega-city) in Asia has been communally linked through an information network in the various fields of finance, trade, investment, business management, information and so on, in order to cooperate with the developed world in the division of labor as well as enabling a division of labor among the Asian cities themselves, with the further aim of constructing an “extended large metropolitan zone” as a preliminary step to the reallocation of each city’s function.

The “extended metropolitan region” centered on the city-state of Singapore implies an extension and reallocation of the metropolitan region that will involve

cooperation with neighboring countries. This is nothing other than the concept of an “international regional economic zone”. We note that the urbanization of the city-state Singapore so that it may become an “extended large metropolitan zone” cannot help extending and reforming the city zone itself, at the same time as drawing in the surrounding countries, and so realizing the concept of an international regional economic zone.

Not only Batam Island itself but the neighboring islands were designated a bonded area and industrial complexes were set up. Subsequently, a huge number of Japanese and Singaporean multi-national enterprises were founded in quick succession, whereupon many Japanese-affiliated and Singaporean multinational enterprises moved into Batamindo Industrial Park, located in the centre of Batam Island. Over an astonishingly short period, the labor market on Batam Island has grown enormously. Multi-national enterprises from the developed world and Singapore have been the main suppliers of the highly skilled technological labor power, while the unskilled labor power of on-the-job production has come mainly from Indonesia. This explains the difference in the quality of labor power, coming as it does from both Singapore and Indonesia. The Batam Island labor market, located on the periphery of the international economic zone, is an example of a typical labor market where labor-intensive industries constitute the bottom level in the international division of labor.

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