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Genesis of a growth triangle in Southeast Asia

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Chapter 5

Capital and Capitalists

It was pointed out in the previous chapters that the expansion of regional trade and shipping was due to the exploitation of raw materials which were in great demand in the world market. A proportion of the capital accumulated from these exports flowed back into the region and served to improve productivity in exploiting these natural resources. Processing manufacturing plants, supporting industries and financial services were established as a result of both backward and forward linkages. Within the triangle, the proximity of geographical location and existing connections facilitated the flow and distribution of capital of various ethnic groups. In the colonial period, this network was formed and maintained mainly by Europeans and Chinese, whereas the Malays were designated to play an increasing role in the post-war period. This chapter focuses on capital and capitalists, differentiating by ethnic origin, and identifying the impact on capital networks. Rather than following a chronology, the discussion is arranged by economic sector, that is agriculture, manufacturing and finance. This chapter concludes with an overview of individual and joint performance of Singapore, Johor and the Riau Islands analysed in Porter's Diamond Model.

1. Agriculture

The production of tropical agricultural commodities was the most important advantage attracting both international and regional capital to the triangle, especially after the establishment of Singapore which guaranteed access to the world market. The production of agricultural primary goods lay at the core of regional trade and supported the later industrial and financial development. However, agricultural production was quite unbalanced due to two structural characteristics. The first one was – and is – the non- or very limited existence of agriculture in Singapore. Although land supply was still abundant when Singapore was founded in 1819, available land for agricultural production was soon exhausted after several decades of intensive cultivation by an exploding population. Up to the 1870s, agricultural plantations could only be found in adjacent Johor and the Riau Islands. The second characteristic refers to the limited subsistence farming in the region, which forced regional food supply to rely heavily on imports. Local agricultural plantation can be characterized as an export-oriented commercial agriculture.

As indicated by the trade structure, there were shifts among important commercial agricultural products that played a different role during the long period studied here. Before the arrival of Europeans, both Chinese and Malays had already been widely engaged in the cultivation of copra, sago, rattan, coconut and vegetables, as well as in keeping livestock. Except for local consumption, the surplus was mainly sent to Singapore, where there was a strong demand.¹ This pattern of agricultural production, however, did not require or generate much capital and was not of great economic significance. Nevertheless, these traditional agricultural activities have been maintained until today, especially in the Riau Islands.² In this study, we have focused on selected agricultural commerce of some economic significance.

The first important agricultural production after the establishment of Singapore was cultivation of pepper and gambir, which was initiated by Chinese in the Riau Islands in the eighteenth century. In the nineteenth century, many of these Chinese were attracted to Singapore, then later moved on to Johor to set up plantations there.³ After several decades of cultivation, this area became the world's largest gambir producer and export centre. The second half of the nineteenth century in this region has been described as the 'Age of Gambir' by historians.⁴

After the decline of gambir and pepper plantation in the early twentieth century in Johor, many Chinese planters switched to pineapples.⁵ The pattern was also observed in the Riau Islands. In Batam, pineapples were very important for the

¹ MvO: Riouw en onderhorigheden (1908).

² Ibid.

³ An, 'Chaozhouese Pioneers at Johor and Muar In Malaysia'.

⁴ 邱新民, '新加坡的甘密时代'.

⁵ Guinness, *On the Margin*, 6.

canning factories in Singapore, such as Tandjong Pinggir, a pineapple plantation, employing a total labour force of 20 Chinese in 1908 based on a concession from the government.⁶ Some other Chinese became tapioca and sago planters and sold their properties as rubber estates to European companies and company promoters in Johor.⁷ In Riau, sago cultivation and trade also expanded in *Benedenlanden* Indragiri, but stagnated in Lingga and Karimun.⁸ However, the dominance of smallholdings plantations and a sparsely scattered population restricted the scale of the cultivation.⁹ Some plantations were also run by the Malays. From the turn of the century, coconut and areca nut were widely planted in Muar and Batu Pahat by Malay and Javanese smallholders.¹⁰ Meanwhile, some European pioneers also experimented with planting on a large scale – sago, coffee, tea, cocoa and tapioca.

Nevertheless, the production of these commodities remained limited.¹¹ It was the plantation of rubber that achieved great success and importance, replacing pepper and gambir as the region's most important export product in the twentieth century. Differing from Chinese dominance in gambir and pepper, rubber was rather a European business from the beginning. Owing to its large demand in the West, rubber became the first regional product which was brought to the world market in large quantities.

Although rubber retained its importance up to the post-war period, its position was gradually challenged and it was replaced by palm oil which brought a third change to regional commercial agriculture. Malaysia and Indonesia became the world's leading producers of palm oil. However, the situation in Johor and the Riau Islands differed markedly. Johor became a major producer of Malaysian palm oil, whereas this product had never been tried out in the Riau Islands on a very large scale. The shift among the three products reflected the evolution of connections between the triangle and the world market, and also the dynamic mutual relationship between the Chinese, Europeans and other ethnic groups.

Age of gambir

Gambir plantation originated from the Riau Islands in the early eighteenth century by Chinese, especially Teochew Chinese.¹² On Bintan and Batam islands, these early

⁶ KV (1905), 54. MvO: Riouw en onderhorigheden (1908).

⁷ JAR (1910), 6.

⁸ KV (1905), 259-60.

⁹ Touwen, *Extremes*.

¹⁰ JAR (1911), 3.

¹¹ Guinness, *On the Margin*, 6.

¹² Trocki, 'The Origins of the Kangchu System 1740-1860'. Berkley, *An Anecdotal History of Old Times in Singapore, 1819-1867*, 307. Jackson, *Planters and Speculators: Chinese and European*

Chinese planters, titled as *soengie hoofd* (river headman), cultivated gambir and pepper in their own *soengies* (river settlements).¹³ However, such self-sufficient production could not generate much capital until it reached a large scale. This was not realized until the 1830s when Temenggong Ibrahim, ruler of Johor, introduced the *kangchu* system, whereby the right of settlement and management of a plantation (also called *kangkar*) was granted to a Chinese headman (called *kangchu*).¹⁴

The *kangkar* varied in size and were found on virtually every river, ranging from 2,500 acres to 20,000 acres.¹⁵ In 1872, 72 *kangchus* were recorded in Johor and the number increased to 94 in 1891.¹⁶ In the Riau Islands, there were still 52 Chinese headmen recorded with a total 95 settlements in 1867.¹⁷ They were opened up on major islands of the Riau-Lingga Archipelago, including Bintan, Batam, Galang, Lingga, Singkep, and Karimun.¹⁸ The cultivation also expanded to Indragiri by two European estates, Gading Estate and Ajer Moelek, but elsewhere experienced decline from the 1900 onwards as a result of the decreasing price and the utilization of suitable land for firewood.¹⁹ It is impossible to obtain a detailed picture of the total area and production of gambir and production in Johor and the Riau Islands. Nevertheless, their relative importance is indicated by the exports of these two products. In 1870, production from the Riau Islands was slightly more than that from Johor. However, in the following several decades, Johor recorded a faster growth than the Riau Islands. In 1900, total exports of gambir and pepper from Johor was recorded at £410,000 and £305,000, whereas the export from the Riau Islands was £95,000 and £27,000.

Unill 1911, the gambir and pepper estates of Johor were all owned by China-born traders (mainly Teochews) living in Singapore. These Chinese capitalists lived in Singapore or other trade centres, while their representatives called the *tauke* (businessmen) acted as managers and lived on the plantations.²⁰ Neither owner nor representative was engaged in the cultivation themselves but through employed planters, who agreed to sell the produce to them at a certain fixed price in return for

Agricultural Enterprise in Malaya, 1786-1921, 7. Colombijn, 'Een milieu-effect rapportage van de gambircultuur in de Riau-archipel in de negentiende eeuw'.

¹³ BPL 2106.I.6A.

¹⁴ Tan, 'Li Yih-yuan and the Study of Chinese in Malaya'. The discussion of *kangchu* system has also been mentioned by various historians, note for example Trocki, *Prince of Pirates*. Trocki, 'The Origins'. Coope, 'The Kangchu System in Johore'.

¹⁵ Selat, 'The Emergence of Commodity Production in a Malay District - Muar, Johor', 325.

¹⁶ STDS (1891), 295-6.

¹⁷ BPL 2106.I.6A.

¹⁸ Trocki, *Opium*.

¹⁹ KV (1905), 261.

²⁰ Fernando and Bulbeck, *Chinese Economic Activity in Netherlands India: Selected Translations from the Dutch*, 214-5.

capital and provision.²¹ The crops could be loaded directly onto twakows or tongkangs (cargo boats) in the *ulu* (headwaters) and taken to Singapore without further handling. Produce was weighed in Singapore, so planters were at the mercy of traders. The situation in Riau is assumed to be of a similar pattern, with, most of the owners, managers and traders of the plantations Singapore based. Even those small capitalists from Johor and the Riau Islands intended to connect themselves to Singapore again by selling all their products in the Singapore market.²²

Both in Johor and the Riau Islands, the growing of gambir and pepper was not their only interest. They were also involved in other undertakings. In Johor, they gradually obtained further rights, such as collecting taxes, especially taxes on gambling and on the sale of pork, opium and alcohol. Similarly in the Riau Islands, many rich Chinese capitalists and businessmen also functioned as opium farmers for the colonial government. Teo Ho Lye used to be an opium farmer and had a dominant influence in the archipelago before engaged in the shipping business. From 1908, opium farming was in the hand of Tan A Tjon, the opium farmer of Tanjung Pinang.²³ Benefitting from the profits of opium farming, many of these opium farmers succeeded in accumulating their initial capital to create numerous links between capitalist development and opium farmers.²⁴ Without exception, these Chinese capitalists migrated to Singapore after they had become rich, leaving their business in Johor and the Riau Islands to the appointed agents. A vast Chinese capital and family network was thus indicated by this pattern of farming system.

In this way, Chinese capitalists and their migration routes created a Chinese capital network in this region. The intensity of this network was not only consolidated by family, kinship and blood relationships between them, but also further strengthened by the establishment of two cross-boundary institutions in Singapore promoted by the Europeans: The Gambir and Pepper Society (*kongkek*) in 1867 and The Opium Farming Syndicate.²⁵ The *kongkek* aimed at promoting the mutual protection and benefit of financiers and planters, and unifying the planting, shipping and trading activities in Johor and Singapore. It also handled complaints from European merchants regarding the quality of these products: in 1887, its representatives met with the representatives of European firms calling in these commodities in the offices of the Singapore Chamber of Commerce to discuss ways and means of improving their quality, and agreeing to call upon the sultan of Johor

²¹ JAR (1912).

²² STDS (1891), 284.

²³ MvO: Riouw en onderhorigheden (1908).

²⁴ Trocki, 'Opium and the Beginnings of Chinese Capitalism in Southeast Asia', 297.

²⁵ Song, *One Hundred Years' History*, 38.

for his help.²⁶ If there was a dispute or quarrel between the owners of gambir and pepper estates and their mortgagees as regards the correctness of the scales of the mortgagees, the *kangchu* had to fully investigate the matter and send the goods to the *kongkek* to be weighed on government scales provided for the *kongkek*.²⁷ The Opium Syndicate, which was under one joint contract with different governments, tried to prevent smuggling and to enter into a mutual understanding that opium farms should be apportioned between governments.²⁸ The Syndicate was able to establish a uniform price for *chandu* at the settlements. The cooperation of Tan Seng Poh, the Riau opium farmer at the time, afforded valuable assistance to the Syndicate in crushing the organized system of smuggling which had for some time robbed the farmers of a large portion of the lawful fruits of their monopoly.²⁹ These two Chinese institutions, together with the gambir and pepper plantations, generated a golden age of strong internal connections within the triangle.

The languishing in the interplantation of pepper and gambir and the collapse of prices from the late 1890s onwards were attributed to several reasons.³⁰ The most important one was from the economic and ecological perspective.³¹ From the point of view of the state, cultivation of gambir was very wasteful considering the nature of its labour-demanding and soil-exhausting cultivation. It could only be planted on newly felled land. If no attempt was made to add manure as fertilizer, as soon as the soil showed signs of exhaustion, the plantation was deserted. The clearing soon became overgrown with grass, which, being very inflammable, was constantly subject to fire, effectually preventing re-forestation. Nevertheless, gambir production could not be prohibited easily, as the cessation of that cultivation would also mean the end of pepper cultivation. In Johor, the situation was further worsened by an insufficient labour supply which, however, was due to the opening of the Johor State Railway. The *kangkar* furthest from the river mouth immediately became the nearest to both a way of escape for the coolies, and an offer of cash wages. The Chinese gambir and pepper capitalists were soon drained of their labour supply. Chinese *kangkar* only retained coolies by offering much more favourable terms than had prevailed before, at the expense of his profits.³²

Faced with such problems, attempts were made to utilize clearings for cultivation of rubber but satisfactory results were unlikely in the exhausted soil.³³

²⁶ Chiang, *A History*, 52-3.

²⁷ Coope, 'The Kangchu System'.

²⁸ CO 882/4/21: Straits Settlements: memorandum of agreement with sultan of Johore as to opium farms.

²⁹ Song, *One Hundred Years' History*, 159.

³⁰ Guinness, *On the Margin*, 2-3.

³¹ JAR (1910), 6.

³² *Ibid.*

³³ *Ibid.*, 5.

The headmen or *kangchus* applied for concessions for the whole or portions of the land occupied by them, and were planting rubber or other types of cultivation.³⁴ In 1911, in Batu Pahat, of the 21 *kangkar* not more than two showed any signs of health.³⁵ Also experiencing the same difficulty, the shift of agricultural plantations was not successful in the Riau Islands where the colonial government's influence was limited. Gambir and pepper plantations were in the hands of smallholders, particularly Chinese, but the scale of their exported commodities was still insignificant compared to elsewhere, for instance in mainland Sumatra. The economic importance of the Riau Islands was marginal within the Netherlands Indies.

East-west connection: rubber

Rubber first attracted the attention of British planters in the 1890s. In Johor, the early plantations were set up along both coasts and then expanded into the interior. However, it was not until the early twentieth century that rubber trees were cultivated on a large scale on estates managed by European merchant houses.³⁶ Many shareholders of these merchant firms were Europeans residents in the Far East, primarily planters, merchants, bankers, professional men and some government officers with capital either in sterling or Chinese currency.³⁷ Among them, Harrisons & Crosfield and Guthrie were the pioneers of European estates in Johor: Mount Austin and Castlewood established near Johor Bahru, The Malay Peninsula (Johore) Rubber Concessions (50,000 acres in 1906) and The Rubber Estates of Johore (25,000 acres in 1906) near Muar.³⁸

In the Netherlands Indies, although the Agrarian Law of 1870 promoted the investment in agriculture by private capital,³⁹ the effects of this policy did not materialize in Riau until the twentieth century when the rubber plantations were introduced. Riau had never been an attractive place for Western capital.⁴⁰ However, most of these plantations were located mainland Indragiri, and only in a small part of the Riau Islands, especially on Bintan and Karimun islands. Under the administration of the Dutch colonial government, the Riau Islands attracted much capital from the Netherlands. Regional Dutch capital often showed various relationships with Singapore. In 1934, Poelau Loemoet Estate and Soegi Estate were given the right to

³⁴ Ibid. (1911), 3.

³⁵ Ibid., 16.

³⁶ Guinness, *On the Margin*, 6.

³⁷ Drabble, *Rubber in Malaya, 1876-1922: The Genesis of the Industry*, 67.

³⁸ Ibid., 49.

³⁹ Thee, 'The Impact of the Colonial Past on the Indonesian Economy', 1-2.

⁴⁰ Touwen, *Extremes*.

exploit rubber lands in Karimun. Although concessions were granted by the Netherlands Indies government, permits were obtained at the Consulate-General of the Netherlands in Singapore.⁴¹ The cultivation of these new estates crops during the period 1910-1940 was also partly undertaken by non-Dutch Western private enterprises.⁴² Many of these British business firms that expanded rubber plantation in the Riau Islands, such as Bintan Estates, Ltd., were financed by Guthrie and Co.⁴³

Financed by large Western merchant houses, these estates possessed the advantage of substantial investment from the very beginning. The Bintang Johore Rubber Estate was registered as a limited company in 1910 in London with a nominal capital of £30,000.⁴⁴ One of the largest European estates in the Riau Islands, Bintan Estates, was a British company involved in rubber plantation in Tanjung Pinang. It was initiated with a capital of £24,000 which was increased to £85,000 in 1927.⁴⁵ Galang Besar Rubber Plantations, a Dutch company founded in 1910 in Tanjung Pinang had capital of £150,000.⁴⁶

There was also some investment in rubber companies by Asians, notably Japanese and Chinese, mainly where they were the owners of property.⁴⁷ Rubber planting by the Japanese was the spontaneous outcome of the interest shown by both individual merchants in Singapore and rich businessmen in Japan. By 1917, the Japanese possessed about 100,000 acres of rubber estates in Johor, increasing from 58,424 acres in 1916.⁴⁸ Most of these Japanese estates were located in Kota Tinggi, which had the largest number of Japanese of all districts in the peninsula. By the eve of the Pacific War, the majority of Japanese estates were limited companies. They were partly registered in Japan, partly incorporated in the Straits Settlements.

Chinese rubber plantation began much earlier than the Japanese. Cheong Chin Heng, one of the Chinese pioneers of the plantation of rubber started his business in Johor as early as the 1870s.⁴⁹ Nevertheless, the Chinese generally did not show much confidence in the permanency of rubber cultivation until the late 1910s.⁵⁰ Following his step, many Chinese, especially Singaporean Chinese, established rubber plantations both in Singapore and adjacent areas, especially in Johor. Tan Kah Kee

⁴¹ *Singapore Free Press and Mercantile Advertiser*, 15 May 1934.

⁴² Thee, 'The Impact', 13.

⁴³ *Singapore Free Press and Mercantile Advertiser*, 12 January 1931, Page 19.

⁴⁴ BT 31/19617/111259: Company No: 111259. Bintang Johore Rubber Estate Ltd. was incorporated in 1910 and dissolved between 1916 and 1932.

⁴⁵ HCHON (1927), 81, Swart, *Rubber Companies in the Netherlands Indies*, 273.

⁴⁶ *Ibid.*

⁴⁷ Drabble, *Rubber*, 67.

⁴⁸ Sudo, *The International Relations of Japan and South East Asia: Forging a New Regionalism*, 129-31.

⁴⁹ Song, *One Hundred Years' History*, 157.

⁵⁰ JAR (1910), 7.

established his rubber plantation in Singapore with an initial capital of £210. In 1916, there were 39 Chinese estates in Johor with a total of 58,203 acres, 15,990 acres of which were cultivated with rubber. This percentage was much lower than that among Europeans and Japanese. The Chinese also established rubber estates in the Riau Islands, but the number was rather limited. One piece of news in 1929 reported that a British planter, James William Futch, had been murdered by a crowd of Chinese. He had acted as an authorised leader in a Chinese rubber and pineapple company in the Riau Islands.⁵¹ In Johor, some Malay estates were organized. The largest investor was the sultan of Johor.⁵² Sultan Ibrahim had a personal interest in rubber and owned two plantations, both located on the outskirts of Johor Bahru (Ayer Molek Rubber Estate and Pasir Pelangi Rubber Estate), with a total 2,800 acres of planted land and 625 labourers.⁵³

Compared to Western estates, the significance of Asian plantations was very limited (Table 5.1). Europeans were the main conductors of capital connections between Singapore, Johor and the Riau Islands. Regional differences can also be discerned. From 1907 to 1916, the number of estates plantation rose from 10 to 151. Up to 1960, there were a total of 490 rubber estates in Johor. Estates rubber plantation in the Riau Islands, however, did not attract significant capital. From 1927 to 1936, the number of rubber estates increased only by only one, from 21 to 22 in the entire Riau Residency, under the influence of the worldwide Depression of the 1930s. Although the number of estates increased to 77 in 1970, the total area of these estates was much smaller than pre-war. Determined by the number of estates in the three regions, the connection was much faster between Singapore and Johor than that between Singapore and the Riau Islands.

Before the outbreak of the Pacific War, the rubber plantation in British Malaya and the Netherlands Indies was restricted by various restrictions, which were quota schemes with basic quotas allotted to the participating territories and applied equally to estates and small-holdings (Table 5.2).⁵⁴ Rubber plantations began to decline immediately after the Pacific War, despite the stimulus from the Korean War. Reasons for the decline vary. The most important was less demand for natural rubber in the world market because of the rise of synthetic rubber. Second, as a result of the accident of fire at the Paya Lebar factory of Aik Hoe & Co. in Singapore in 1950, insurance companies became reluctant to insure large quantities of rubber at the new values. There was hence not enough available money in the country to finance

⁵¹ *Soerabaijasch handelsblad*, 16 May 1929.

⁵² Lim, *Johor*, 34.

⁵³ JAR (1916).

⁵⁴ Bauer, 'The Working of Rubber Regulation'.

rubber.⁵⁵ Third, the post-war political situation did not encourage Western investment, especially not in Indonesia, where the process of decolonization brought a sudden end to Western rubber estates. In Malaysia in 1966, European-owned rubber estates only accounted for 39 per cent of total production.⁵⁶ In Indonesia, as early as 1948, the Dutch had begun putting estates up for sale in Singapore – an estate of 2,800 acres on the Riau Islands of Kundur, including 875 acres of exploitable rubber and 325 acres of penang nuts, one rubber factory, one sago factory and one hospital.⁵⁷ The decline of the large rubber estates offered an opportunity for rubber smallholders. Unlike an estate plantation which is usually larger than 100 acres, smallholding ranged from four to 10 acres and the size remained unchanged up to the 1960s (Table 5.3).⁵⁸ They were mainly operated by Chinese and Malays.

Table 5. 1. Rubber estates in Johor in 1916 and in Riau Islands in 1910.

Owner	Number of estate	Total area	Under rubber	Cultivated	Production	Labour force
		Acres	Acres	Acres	Lb	
Johor, 1916						
Chinese	39	58,203	15,990	16,360	99,400	664
	26%	19%	12%	11%	1%	2%
European	63	180,848	83,687	93,201	12,334,679	23,126
	59%	61%	63%	90%	81%	59%
Indian	1	-	-	-	-	-
	1%	-	-	-	-	-
Japanese	40	58,424	33,659	34,144	760,000	4,028
	26%	19%	25%	23%	6%	14%
Malay	6	3,730	576	576	15,800	120
	1%	0%	0%	0%	0%	1%
Sultan	2	2,842	2,842	2,842	490,938	625
	1%	1%	2%	2%	4%	2%
Total	151	304,047	136,754	147,123	13,700,817	28,563
The Riau Islands, 1910						
European	10	14,233	4,219	34,609	83,760	-

Source: JAR (1916), SHS (1910).

⁵⁵ *Browns Malayan Economic Review*, vol. 1, 1951, page 53.

⁵⁶ Mohamed, *Export Trade*, 27.

⁵⁷ *Straits Times*, 12 August 1948, Page 7.

⁵⁸ Selvadurai, *Socio-economic Survey of Rubber Smallholders in West Johore*.

Table 5. 2. Rubber export quotas for Johor, 1934-1939.
(percentage share)

	1929-32	1934	1935	1936	1937	1938	1939
Estates	49.8	57.9	54.3	58.5	58.9	59	57.2
Smallholdings	50.2	42.1	45.7	41.5	41.1	41	42.8

Source: *Malay rubber: the interwar years*, 292.

Table 5. 3. Acreage of land planted and number of parcels in estate agriculture in Johor in the 1960s.

	Land operated		Rubber land		Coconut	Others
	Acres	No. parcels	Acres	No. parcels	Acres	Acres
Potion	9.8	2.2	8.6	1.9	0.7	0.5
Muar	14.5	4.1	12.3	3.1	1.2	1
Batu Pahat	11	2.6	9.6	2.2	0.9	0.4

Source: Selvadurai, *Socio-economic Survey*, 2.

The number of smallholdings increased much faster than the estates. Only in Muar, 4,797 extracts were issued in exchanges for *Surat Sementara*, which were temporary titles issued to smallholders pending demarcation and settlement in 1925.⁵⁹ In the Riau Islands, during the period of export expansion in the first four decades of the twentieth century, peasant smallholders played a much greater role.⁶⁰ The Great Depression of the 1930s led to a steep decline in agricultural prices which hurt both Western estates and indigenous smallholdings. Crop production at various estates contracted as a result of export restriction schemes. However, in the Outer Islands (including the Riau Islands) in the Netherlands Indies, these restriction schemes proved ineffective, notably with the rubber smallholders who increased their output through increased tapping to maintain income levels in the face of declining

⁵⁹ JAR (1925).

⁶⁰ Thee, 'The Impact', 12.

rubber prices.⁶¹ This also took place in Johor. Up to the late 1930s, rubber smallholdings began to outnumber estates in planted areas. In Johor, in 1932, some 60 per cent of the rubber was still planted on estates. Up to 1939, the total area of rubber smallholdings plantation exceeded that of estates (Table 5.4). In the Riau Islands in 1936, a total of 9,415 smallholdings were recorded. The situation was completely overturned in the post-war period when large estates vanished from rubber cultivation and smallholders became the dominant producer. An Indonesian farmers' co-operative association was formed in Tanjung Pinang in 1953, named the *Koperasi Rakjat Tani Kabupaten Riau di Tanjung Pinang*. The association had more than 300 members, most of whom were owners of rubber, coconut, and fruit plantations.⁶² Up to 1970, the total planted area by smallholders was almost three times that of estates (Table 5.5).

In general, the estates were more important in the colonial period, whereas smallholders gained significance in the post-war era. Their growth reflected the picture as a whole of regional rubber plantation (Figure 5.1). Attracting more capital, rubber estates in Johor had a greater economic significance than in the Riau Islands during the colonial period. However, their importance declined after the war, influenced by the world market. By contrast, rubber plantations in the Riau Islands kept growing after 1960 because of the rising importance of smallholders. From this point of view, the integration of Johor into the post-war world market was deeper than the Riau Islands.

Table 5. 4. Land planted with rubber in Johor, 1906-1970.
(thous. acres)

	1906	1910	1916	1925	1932	1940	1960	1970
Total	4	48	137	470	970	954	550	462
Estates	-	44	75	302	459	560	-	161
Smallholdings	-	41	62	168	511	395	-	301

Source: JAR (1906, 1910, 1916, 1925, 1932, 1940), RSH (1960, 1968-1972).

⁶¹ *Ibid.*, 14.

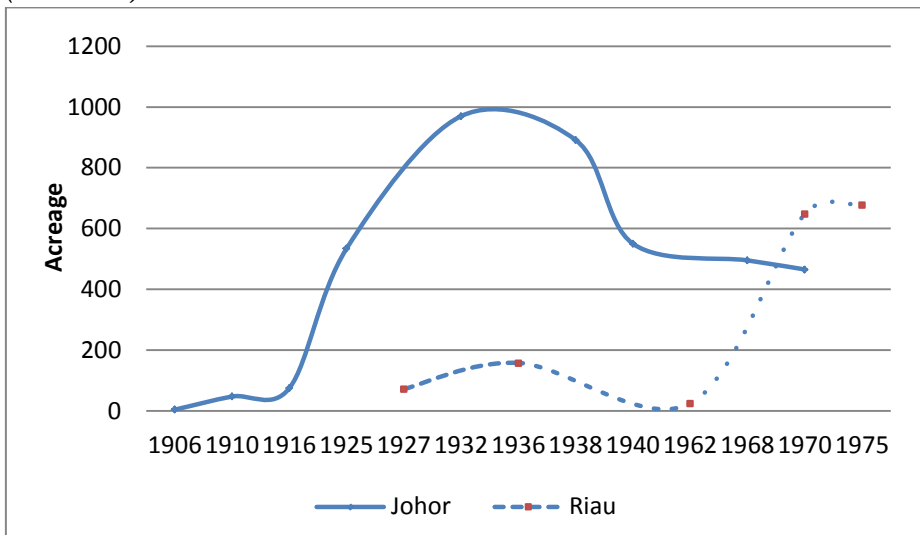
⁶² *Straits Times*, 14 December 1953, Page 7.

Table 5. 5. Land planted with rubber in Riau, 1927-1975.
(acres)

		1927		1936		1970		1975	
		No.	Acres	No.	Acres	No.	Acres	No.	Acres
Estates	The Riau Islands	21	34,029	22	42,052	77	24,713	92	18,070
	Indragiri							38	
Smallholders	The Riau Islands	-	38,029	9,415	66,246	-	623,436	-	162,051
	Indragiri			26,756	49,715				497,705
Total		21	72,058	36,193	158,013	77	648,149	130	677,826

Source: MCKS (1927, 1936).

Figure 5. 1. Land planted with rubber in Johor and Riau, 1906-1975.
(thous. acres)



Source: Table 5.3, Table 5.5.

Diversification: palm oil

Although rubber staged a rapid expansion in Johor in the late colonial period, its relative share in the total agricultural production declined steadily from 75 per cent in 1928 to 54 per cent in 1932 as a result of the expanding plantation of oil palms.

Oil palm seeds were brought to Johor as early as 1875. However, planting was not widely established until the 1920s when rubber prices fell. Palm oil was regarded as a possible alternative to rubber. Thus, when Johor recovered from a decline of rubber production in the 1920s, oil palm plantation was again undermined by rubber. In 1929, there were only 27 oil palm estates in Malaya, five of which were in Johor. By 1933, the number had increased to six. The products from palm oil estates were exported by railway in tank wagons to Singapore for shipment to a palm oil bulking company.⁶³ During the Japanese occupation, palm oil plantations were neglected and many of the expensive factory installations were destroyed.⁶⁴ Great efforts were made to rehabilitate the plantations immediately after the war. Guided by the Malayan government's liberal policy, the palm oil plantations in Johor underwent a rapid expansion. For the early 1960s, statistics record only 32 estates in all of Malaya.⁶⁵ However, the number increased to 121 in 1965, 19 of them located in Johor with acreage of 79,501 acres, producing 62,881 tons of palm oil and 14,315 tons of kernels, accounting for more than 40 per cent of total Malaysia production (Figure 5.2).⁶⁶ Today, palm oil has already gained a predominant position in agricultural estate production.

Table 5. 6. Planted area for palm oil in Johor, 1930-1972.
(thous. acres)

Year	Acreage, mature	Acreage, total
1930	9,092	20,422
1933	12,190	30,067
1939	29,934	36,621
1968	96,016	179,695
1969	125,584	204,736
1970	152,597	231,202
1971	172,374	250,702
1972	193,799	292,154

Source: JAR (1930, 1933, 1939), OCTS (1968-1972).

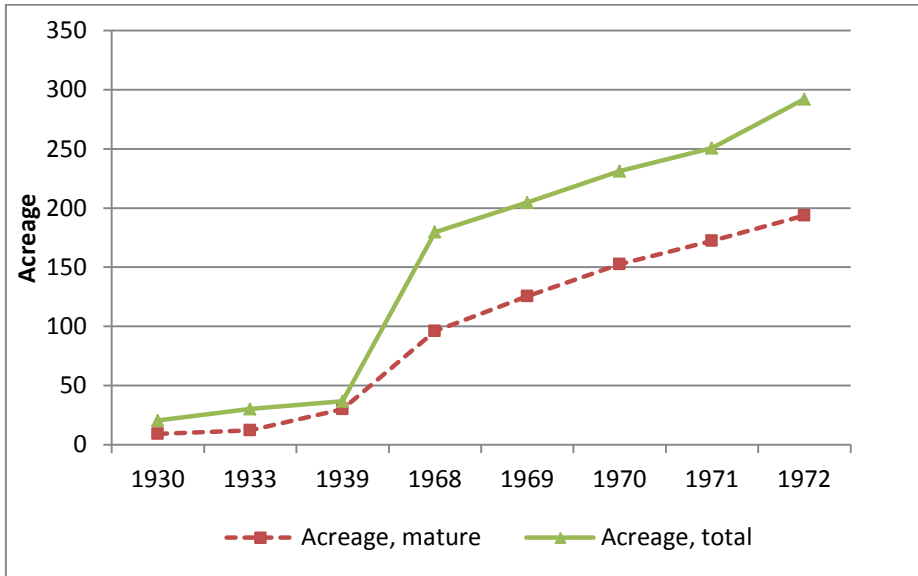
⁶³ JAR (1933).

⁶⁴ Khera, *The Oil Palm Industry of Malaysia: An Economic Study*, 25.

⁶⁵ Lim, *Johor*, 33.

⁶⁶ Williams and Xu, *Oil Palm Cultivation in Malaya: Technical and Economic Aspects*.

Figure 5. 2. Land planted with palm oil in Johor, 1930-1972.
(thous. acres)



Source: Table 4.6.

Although Indonesia has been an important palm oil producer next to Malaysia in the post-war period, this profitable cultivation did not appear in the Riau Islands in the period under study.⁶⁷ Since the 1970s, estate groups under public ownership began setting up large oil palm plantations on mainland Sumatra. Nevertheless, the mainland Riau Province did not become a plantation area of palm oil until the 1990s and these plantation have not extended to the Islands!⁶⁸ No agricultural diversification took place in the Riau Islands.

Like rubber, the plantation of palm oil was also initiated by large European estates. The Malaysian estates were mainly owned by private individuals or by groups which exercised management functions. The Palm Oil Plantation with its head office in Singapore was the largest company engaged in this cultivation in Johor with a planted area of more than 10,000 acres in Kluang district in the colonial period, representing a complete British dominance.⁶⁹ After the Pacific War, many of these

⁶⁷ Comparative development of oil palm plantation and production could be obtained from the statistics given by ASEAN Secretariat, *ASEAN Selected Statistics, 1967-1983*, 19-21, 148-9.

⁶⁸ Corley et al., *The Oil Palm*, 14-7.

⁶⁹ Oil Palm Development in Malaya, *Singapore Free Press and Mercantile Advertiser*, 7 January 1930.

estates were still controlled by Europeans as property of public companies which, in turn, were managed by British agency houses. Central control under a common agency firm enabled groups of estates to achieve greater efficiency and stability by drawing from a pool of specialized services and capital resources. Therefore, 'the Management Agency System is an organic link between home capital and overseas enterprise in the Eastern plantation industry.' Foreign-owned estates in 1972 accounted for 68 per cent of the total acreage of palm oil estates in Peninsular Malaysia.⁷⁰ It is evident that the European estates' capital inputs were large. By contrast, the Malay estates, particularly the smallholdings, few inputs were monetized.⁷¹

Post-war development saw an increase of local capital from of smallholders (Table 5.7). It was due to some factors in the 1950s and 1960s, in particular the emphasis on economic diversification away from rubber as promoted by the Malaysian government.⁷² Guided by the government's liberal policy, oil palm plantations achieved a rapid expansion, attracting and settling people in new rural areas.⁷³ This was further stimulated by the foundation of FELDA (Federal Land Development Authority) and KEJORA (Kemajuan Johore Tenggara Development Authority) which encouraged the smallholding sector to engage in more extensive cultivation of oil palm.⁷⁴ FELDA was established in July 1956 to channel funds into development of the remoter parts of the country. It has, since 1960, been directly responsible for the actual development, ranging from land clearing, planting of main crops, development of villages, selection and emplacement of settlers, management of projects, provision of credit, processing, marketing service, and facilitating social and community development. As the main government agency involved, it represents the largest single producer of palm oil in Malaysia. KEJORA is another State land development authority which was established in June 1972 in Johor State in order to develop 750,000 acres of land as recommended by the Johor Tenggara Master Plan which was formulated in line with the main objectives of the NEP. By 1980, a total of 31,466 acres of land was developed for oil palm plantation. Up to 1985, 55 projects for palm oil and rubber were carried out in Johor, covering 328,120 acres of land.⁷⁵

⁷⁰ Khera, *The Oil Palm*, 128-31.

⁷¹ *Ibid.*, 135.

⁷² Pletcher, 'Regulation with Growth: The Political-Economy of Palm Oil in Malaysia'.

⁷³ Hackenberg, 'Urbanization and Migration in Asean Development'.

⁷⁴ Anuwar, *The Palm Oil Industry*, 2.

⁷⁵ Hotta and Wang, *Fishermen Relocation Programme in Peninsular Malaysia*.

Table 5. 7. Estates and smallholders in palm oil production in Johor, 1968-1976.
(thous. acres)

	1968	1969	1970	1971	1972	1973	1974	1975	1976
Estates	149.7	169.2	182.9	198.2	222.4	249.5	291.5	318.3	339.7
Small holdings	30.0	35.5	48.3	52.5	69.8	100.4	131.2	173.6	162.0

Source: OCTS (1968-1976).

From a comparative perspective, the unbalanced regional distribution of ethnic capital and differential effects of governmental policies resulted in dynamic connections between the three regions. A primary sector in Singapore did not exist, whereas in Johor and the Riau Islands, regional agricultural economy was initiated by the expansion of pepper and gambir from the second half of the nineteenth century. The development of gambir and pepper plantations in the nineteenth century relied more on intensive Chinese work than capital. Very few successful Chinese cultivators could normally net an income of about £120 to £160 a year.⁷⁶ Therefore, the main wealth of both Johor and the Riau Islands was not realized until the large influx of capital in rubber and palm oil, both of which required large investment. After achieving independence, the state of Singapore's agriculture was still increasingly marginalised in terms of high labour inputs, low applications of technology.⁷⁷ By contrast, a considerable diversification took place in post-war Johor as guided by government, especially after the implementation of the NEP of Malaysia from 1971. It was indicated by the widely cultivated oil palm, which gradually replaced rubber as the most important regional agricultural product. By contrast in the Riau Islands, the agricultural structure was less diversified, with a continued high dependence on rubber. Although other crops, such as copra and pineapple, performed a complementary role in all regions, they did not have much to contribute to commercial agriculture.

In terms of capital investment in the primary sector, Chinese, Europeans and Malays were represented in all three periods. Chinese and Europeans were in favour of cross-regional investment. A large proportion of Chinese planters and European estates were Singapore-based but spread their business to Johor and the Riau Islands. Determined by the scale of their capital, the regional connections created by Europeans through rubber plantation were much stronger than Chinese pepper and gambir relationships. By contrast, Malay smallholders tied themselves firmly to the land where they stayed. The flourishing of smallholders in the post-war period

⁷⁶ Selat, 'The Emergence of Commodity Production in a Malay District - Muar, Johor', 326.

⁷⁷ Neville, 'Agribusiness in Singapore: A Capital-Intensive Service'.

indicated a loosening connection between Singapore, Johor and the Riau Islands. This was catalyzed by the Malaysian and Indonesian policies of achieving full economic independence. In fact, the Malaysian agricultural plantations have depended heavily, and still, to a large extent, on foreign capital and entrepreneurship. European capital has long dominated the Malaysian agricultural production with a considerable degree of vertical integration.⁷⁸

2. Manufacturing

The development of the agricultural sector fostered the formation and expansion of the manufacturing sector. To fulfil world demand for manufactured exports, many processing and supporting industries were set up as a result of backward and forward linkages. Different from agriculture's concentration in Johor and the Riau Islands, most factories were established in Singapore, than extended to the producing area of these raw materials. This section provides detailed surveys of agricultural industries, mining industries, forestry production and individual supporting industries.

Agroprocessing industry

A common and traditional definition of agroprocessing industry refers to the subset of manufacturing that processes raw materials and intermediate products derived from the primary sector.⁷⁹ Considering the relative importance of different agricultural products, main attention is paid to the processing industry of commercial agriculture and food production. According to the period of their emergence and scale, they are distinguished as early establishments and modern industries.

Traditional establishments

The embryo of regional industries came from the treatment of gambir. Except for its traditional use as an ingredient of betel drug, gambir was also processed in the form of small cubes or round cakes to meet the demand from Western leather industries, resulting in the establishment of tanning, dyeing and brewing industries in Singapore in the course of the nineteenth century.⁸⁰ In 1889, there were 40 dyers and 20 tannery establishments in the city to process gambir, which was mainly supplied by Johor and the Riau Islands. A few other processing industries, for the products such as copra, sago and oil, were also set up, but on a smaller scale (Appendix xxxvi). With very few exceptions, these factories were privately owned by the Europeans with extensive connections with businesses scattered throughout British Malaya and the

⁷⁸ Khera, *The Oil Palm*, 20.

⁷⁹ FAO, *The State of Food and Agriculture, 1984: World Review: The Ten Years since the World Food Conference Urbanization, Agriculture and Food Systems*.

⁸⁰ Colombijn, 'Of Money'.

Netherlands Indies.⁸¹ The establishment of these industries and the expansion of plantations were founded on large labour inputs and hard work rather than skill and capital. This resulted in a large increase of immigration and rapid population growth, which in turn required the establishment of food production manufacturing, which was mainly operated by European firms.

Very few industries were actually owned by Chinese. In Singapore in 1889, they only possessed five food production factories: Chua Lum (rice mill), Low Juan (sago factory), Ang Say Beng (sago factory), Wee Bin (sago factory), Wee Guan Ho (sago factory). There was also a Ho Ho Biscuit Factory founded by Chew Boon Lay later in the 1890s.⁸² Compared to Europeans, the Chinese capitalists had a disadvantaged position in terms of number and size of their firms. Faced with various problems, these small-scale Chinese factories were vulnerable to external disturbances. Among these Chinese factories, there was only one, Ang Say Beng, which was still in operation up to 1907.

Due to fierce European competition in Singapore, Chinese capitalists invested their capital more in Johor and the Riau Islands. Both numbers and scale were much smaller than in Singapore. In Johor, the earliest notable enterprise was the Malacca Rubber and Tapioca Company, formed in 1898 by a syndicate of the Chinese, Tan Chay Yan, who in the same year showed samples of rubber at the Malacca Exhibition.⁸³ Some other industries included sago processing and fisheries. In the Riau Islands, Chinese capital was found in the agroprocessing industries of lime-kilns, sago-rasp and sago-wash. Although the processing industries of copra, sago, rice and other food production industries were not comparable to modern and heavy industries in terms of capital, technology and output, they still played a supplementary role in regional economic development. Up to the 1970s, this pattern of early industries was still the same in the Riau Islands, which suggests a limited industrial diversification and technical improvement (Appendix xliii).

Modern industries

In the twentieth century, industrial development was characterized by expansion of existing industries and the creation of new enterprises. The emergence of rubber and pineapple plantations, especially, required the establishment of rubber processing industries and cannery and preservation factories. The rise of these establishments formed the foundation of modern agroprocessing.

⁸¹ SYB (1947).

⁸² STDS (1891, 1907).

⁸³ Drabble, *Rubber*, 21.

Rubber processing

In connection with the preparation of rubber, the creaming process for concentrating latex was worked on a commercial scale.⁸⁴ In around 1910, the world saw the first rubber boom, with the Malay states the chief rubber producer. The rubber industries were also worked on a commercial scale on estates in Singapore, financed not only by European merchant houses but also by Chinese smallholders supported by their *chops*.

Later on, they were also established in Johor and the Riau Islands but in limited numbers. In 1932, there were two revertex plants and a large central factory using centrifugal concentrators working in the state of Johor.⁸⁵ One of them was the Lee Rubber Company, founded by a Singaporean Chinese, Lee Kong Chian. Starting as the Lee Smoke House in Muar, Lee Rubber gradually became the largest Chinese rubber processing factory in Johor. These Chinese industries in Johor were not only involved in planting but also in rubber processing, export and trade. They soon diversified into tapioca processing, pineapple canning, small ice factories, aerated water plants, engineering workshops, printing works, beer distilleries, brickworks, china clay, jelutong, plywood, etc.⁸⁶ The establishment of these industries was more limited in the Riau Islands where in the early 1900s there were only four European factories established, including Galang Noeming, Kepala-Djeri and Kelong, which employed Javanese contract labour and produced rubber and copra.⁸⁷

In Singapore, the rubber (re-milling) industry remained active and important in the colonial period, despite unstable prices and various restriction schemes, until the 1950s when the quantity of wet slab arriving from neighbouring territories was not large and the cost of local rubber was relatively high. In 1947, there were eight Chinese companies operating 12 milling factories and two European companies operating one each which employed a labour force of more than 5,000.⁸⁸ But many millers found it exceedingly difficult to maintain adequate working stocks.⁸⁹ Up to 1970, among the total of 1,790 industrial establishments, only 27 were engaged in rubber processing with a total of 4612 workers,⁹⁰ dropping from 5,683 in 1958.⁹¹ However, in Johor and the Riau Islands, especially the latter, rubber processing was still the regional pillar industry (Table 5.8).

⁸⁴ JAR (1932), 15.

⁸⁵ JAR (1932).

⁸⁶ JAR (1933).

⁸⁷ MvO: Riouw en onderhorigheden (1908).

⁸⁸ SYB (1947), 59.

⁸⁹ CSAR (1956), 88.

⁹⁰ YSS (1971/1972), 48, 53-4.

⁹¹ MSMDESS (1960), 11-3.

Table 5. 8. Rubber processing industry in Johor in 1966 and in Riau in 1973.

Johor						
	Hua Lian Rubber Manufacturers Company Limited					
Rubber	Revertex limited					
manufacturer	Shum Yip Leong Rubber Works Limited					
	Waterhouse Rubber Rroducts Limited					
Riau						
	Pakan- baru	Kampar	Indragiri Hulu	Indragiri Hilir	Bengkalis	The Riau Islands
Rubber fumigation	1	-	4	1	6	-
Crumb rubber	4	3	2	-	5	3

Source: SMD (1966), RdA (1975).

Pineapple canning

Pineapple canning was another light industry carried out mainly by Chinese estates and smallholders because of the low requirements in technology and capital. According to an article on the pineapple preserving industry in Singapore in 1908 by E. de Kruff, the industry was not favoured by European capitalists, although Singapore took the lion's share of the preserved pineapple export trade. Almost all the factories were in Chinese hands. European hesitation in canning was probably due to the following reasons:

1. Speculation in the product. Owing to lack of working capital, the packers had to sell their product at once, and could not wait for a more favourable market. At the auctions in London and Liverpool, speculators manipulated the price with disastrous results to the Chinese preservers, who worked with insufficient capital.
2. The advance system. By receiving advances in money and in raw materials, such as tinsplate, the preservers were at the mercy of exporters.
3. Want of capital. This represents the employment of machinery to secure important saving in manual labour.⁹²

As early as 1902, some Chinese business firms were also engaged in the sale of pineapple preserving machines, implying the emergence of the canning industry.⁹³ The first Chinese cannery in Singapore was initiated by Seah Eu Chin and his son Seah Liang Seah under their *Chop* Chin Choon and *Chop* Chin Giap. Later, Tan Taw Hee built up a flourishing tinned pineapple factory under the *Chop* Tek Watt. The fruit was obtained from Tanjung Pinggi and Pulu Batam, until its cultivation was

⁹² Song, *One Hundred Years' History*, 428.

⁹³ Kim Hoe & Co., see *Straits Times*, 4 January 1902, Page 3.

superseded by rubber.⁹⁴ In 1906, 16 factories in Singapore produced 707,943 cases⁹⁵ of preserved pineapples, which would represent an average daily output of 4,500 tins from each factory. In 1936, there were still 13 factories employing more than 15,000 Chinese labourers.⁹⁶

Post-war canning in Singapore was still maintained as a Chinese business. In 1949, there were three canneries operating in Singapore, producing 189,958 cases of canned pineapple, and represented 33 per cent of the total Malayan production.⁹⁷ In 1956, the sole Pine-Apple Preserving Company produced a total of 13,715 tons of canned pineapple in Singapore, representing an increase of 64.16 per cent over 1955. The company used 28,486 tons of small growers' pineapples (3.75% were grown in Singapore, 11% from the Riau Islands, and 85% from the Federation).

Such Chinese business was also extended to Johor in 1924. The best known was the Lee Pineapple Company. It was a landmark in Skudai and passers-by could hear the distinct pong of the canning waster as they approached the factory. The Lee Pineapple Company is also the only surviving cannery today.⁹⁸ Post-war canning saw more participation of smallholders. In 1947, a committee was set up in Johor to discuss the re-organization of the industry.⁹⁹ There were five estate canneries in Johor in the 1970s: the Lee Pineapple Cannery, the United Malayan Pineapple Cannery, the Lam Huat Cannery, the Pineapple Cannery of Malaya, Pekan Nenas, and the Pineapple Cannery of Malaya, Pulau Sebatang.¹⁰⁰ In a registration of smallholdings in Johor by Wee in 1971, 64% of the smallholdings were less than five acres, 26% in the five to 10 acres groups, 6% in the 10 to 15 acres group, 2% in the 15 to 20 group, and the remaining 2% over 20 acres.¹⁰¹ The harvested fruits were usually transported by bicycle from the collecting point to the roadside, a distance of about 1.3 miles.¹⁰² All the fruits grown by the smallholders were sold to the canneries through organizations or individuals authorized by the Malayan Pineapple Industry board. There were pineapple marketing cooperatives, farmers associations and licensed pineapple dealers. The private dealers or vendors were more popular because of their long acquaintance, prompt payment and availability of lorry transports. The private dealers (as marketing agents) transported the fruits from the roadside to the canneries.

⁹⁴ Song, *One Hundred Years' History*, 429.

⁹⁵ 36 tins = 1 case.

⁹⁶ CO273/620/14: Labour Disputes in Malaya

⁹⁷ CSAR (1950, 1967).

⁹⁸ Lim, *Johor*, 34.

⁹⁹ SYB (1947), 56.

¹⁰⁰ Lee, *Economics of Pineapple Smallholdings in Johore*, 20-4.

¹⁰¹ *Ibid.*, 4.

¹⁰² *Ibid.*, 20.

Palm oil industry

The first European palm oil industry in Johor, the Elaeis Estate Factory, was set up by Tungku Mahkota in August 1929 using hydraulic presses.¹⁰³ In the following decades, the palm oil industry underwent rapid development. In 1933, another two estates lay down light railway systems, one of them allowing truck transport direct from factory to port. On Ulu Remis estates, the sultan opened a spacious factory fitted with a Stork Expression Plant capable of dealing with the output from 8,000 acres of palms.¹⁰⁴ However, the palm oil industry was completely neglected during the period of Japanese occupation. It did not recover until the implementation of the government's diversification policies in the 1950s. Under the FELDA and KEJORA systems, many smallholders' palm oil industries were set up in the plantations. One of the joint ventures owned by the FELDA in Johor, Johore Bulkera, was established in 1974 with 12 palm oil producers providing storage and export facilities for palm oil. Other important companies included Johor Oil Palm Plantations¹⁰⁵, Kamayan Oil Palm¹⁰⁶, Kahang Palm Oil Mill (KPOM)¹⁰⁷, and Kulim (Malaysia).¹⁰⁸ In total, 10 palm oil mills and one large palm oil bulking installation were planned at a port near Johor Bahru by FELDA during the Second Malaysia Plan (1971-1975).¹⁰⁹ Such local dominance showed that, compared to the colonial period, the capital connection with Singapore through Western agency firms had been cut off.

Lacking oil palm plantations, this type of industry was absent in the Riau Islands. Only in the 1980s were some projects planned to introduce the palm oil industry. In 1982, the Palm Oil Plantation and Processing Plant was expected to be established by PMDN (*Penanaman Modal Dalam Negeri*, domestic investment) in Keritang district in Indragiri Hilir.¹¹⁰

¹⁰³ JAR (1930).

¹⁰⁴ JAR (1933).

¹⁰⁵ *Straits Times*, 20 September 1984.

¹⁰⁶ *Singapore Monitor*, 22 November 1982.

¹⁰⁷ *Ibid.*, 20 September 1984, Page 24.

¹⁰⁸ *Ibid.*, 12 June 1985, Page 22.

¹⁰⁹ Lee, *The Monetary and Banking Development of Singapore and Malaysia*, 197.

¹¹⁰ Regional Investment Coordinating Board of Riau Province, *Project Information: Palm Oil Plantations and Processing: Rubber Plantations and Processing*.



Oil Palm estates in Segmat, Johor

Mining

Rich mineral deposits formed an asset which, next to commercial agriculture attracted much capital. Overseas Chinese had been engaged in small-scale tin mining in Malaya since the eighteenth century by using traditional washing methods. The arrival of Europeans and their method of dredging – a capital-intensive method – improved the productivity of mining. Up to the early twentieth century, European production accounted for about two-thirds of Malaya's output.¹¹¹ Many of these Western mining companies were registered in Singapore. In 1891, there were three engaged in mining on the Malay Peninsula: the Jelevu Mining and Trading Company, the Mahlembu Mining Company, and the Raub Australian Syndicate. In 1907, the total number of mining companies increased to 15, representing a rapid increase of European capital investment. The majority of tin ore was transported to Singapore for smelting. In 1891, there was one tin smelter located at Pulau Brani, off Singapore. The Straits Trading Company's new smelter at Butterworth in the Federation of Malaya treated part of the ore formerly sent to Singapore.¹¹²

Although tin ore was also found in Johor near the Kota Tinggi district on the alluvial plain of the Johor River, extending to the slopes of the mountains Panti and Mentahak, these mining sites did not attract much European capital. The tin deposit in Johor was not as rich as in Pahang, and Johor was a place that European methods could not possibly be introduced due to their demand for large capital.¹¹³ In the early twentieth century, there were only two European mining companies conducting

¹¹¹ Kratoska, *The Japanese Occupation*, 20.

¹¹² CSAR (1956), 86.

¹¹³ Lake, *Johore*, 281-97.

business there: the Royal Johore Tin Mining Company, registered in Singapore, and the Tengkil Tin Syndicate, registered in Johor. In 1932, another company, Pelepah Tin Dredging Company, was the only dredging technology applied in Johor.

On the local side, although Malays had been mining tin for centuries, their activities were carried out on a smaller scale, and Malays played little part in the new mining industry. Some Chinese mining industries were set up here, yielding good return by using the labour-intensive hydraulic and gravel pump method.¹¹⁴ These Chinese capitalists, however, were completely Singapore-based. The first tin mining in Johor was set up by Mr Seah Cheng Joo, younger son of Seah Chiam Yeow. Since 1915, he had been engaged in tin mining at Mersing with Seah Eng Kiat. Another Chinese, Tan Kim Wah, born in Singapore in 1875, went to Johor to try his fortune at the tin mines in the early twentieth century. Under prospecting licences, he worked both in Johor and Siamese States for a number of years. In 1914, his partner, J. C. Robertson, while tracing a footpath at Ulu Jemluang, Johor, came across some rich tin land in the Ulu Jemluang Valley. Eventually he secured a mining concession from the colonial government. Another Chinese tin mining business, the Hap Liong Company formed by Tan Wi Yan, Sim Cheng Mia, J. C. Robertson, and E. Fong Seng, Wong Siew Yuen, and the Ulu Jemluang Tin Mines, had both been worked since with great success.¹¹⁵ From 1910 onwards, deposits of alluvial tin were worked in the neighbourhood of both the Johor and Muar rivers and further deposits were believed to exist in the Endau Valley, but up to then no extensive fields had been located there.¹¹⁶ In 1920, some reports pointed out the existence of oil and coal, but no serious attempts were undertaken to explore these sites.¹¹⁷ The following decade saw a decline of the Chinese tin industry as a result of its inability to compete with modern technology and equipment.¹¹⁸ Other mining industries worked on a small scale. In addition, there were also other industries of clay, gold washing and wolfram productions that showed a strong Chinese influence.¹¹⁹

More extensive mining exploration took place in Johor from the 1920s by the Japanese who showed a great interest in the production of iron and bauxite ore.¹²⁰ Iron ore mining was initiated by the Japanese Haematite (Iron-Ore) Mine at Bukit Medan. In 1932, a new company was set up by Chinese on the Sedili River in this year. The 1940s saw more Japanese business: the Sri Medan Mine, Batu Pahat; the Iizuka

¹¹⁴ Ibid.

¹¹⁵ Song, *One Hundred Years' History*, 355, 519.

¹¹⁶ JAR (1910), 2.

¹¹⁷ JAR (1910), 2.

¹¹⁸ Ng, *The Chinese*, 38.

¹¹⁹ JAR (1925).

¹²⁰ Kratoska, *The Japanese Occupation*, 20.

Mine, Endau. However, the Sri Medan Mine was closed down during the Japanese occupation, partly owing to lack of ore resources and also because the machinery was required for mining bauxite. Compared to iron, bauxite revenues were much richer in Johor. It was also initiated by the Japanese in 1936 at Batu Pahat. In 1938, another unit was opened at Kim Kim by a Chinese miner. Another two new mines were opened during the Japanese occupation, one in Malacca, and one, the Nangan Mine, in southeast Johor. The Nangan near Pengarang was started to exploit several deposits covering a large area in this neighbourhood. In 1949, there were 14 bauxite ore mines in the state, the majority of which indicated the investment of Japanese capital. Development continued in the post-war period. In 1964, there were 53 mines in total, producing tin, iron and bauxite. The number increased to 71 in 1965 and 94 in 1967.¹²¹ The largest three were the Ramunia Bauxite (Telok Ramunia)¹²², the Southeast Asia Bauxite (Telok Ramunia), and the Heah Joo Seang Rubber Estates. Most of these mines were located in Kota Tinggi, Mersing and Muar. In Kota Tinggi, especially production from this district accounted for more than 90 per cent of the ores produced in the state. Mining in the colonial period had shown European importance, whereas after the 1950s,¹²³ most of these ores were exploited by Asians, especially Japanese who had a dominant position in this business in Johor.¹²⁴

Table 5. 9. Labour force in mining in Johor, 1931-1966.

	Iron	Tin	Gold	Bauxite	China clay	Total
1931	1228	1707	-	-	-	-
1932	956	871	50	-	5	1882
1936	2143	2072	32	55	2	4304
1937	1875	2426	-	209	18	4538
1938	1597	1847	22	742	-	4208
1949	-	-	-	750	-	-
1961	-	-	-	320	-	-
1966	881	725	60	424	-	2090

Source: JAR (1931- 1941), ARFM (1949, Department of Geological Survey, Department of Mining Industry), ASTSIJB (1963), ABSM (1964, 1968).

The development of the mining industry in Johor is apparent from the labour force employed (Table 5.9): the 1930s can be regarded as a golden age of mining in Johor. In the Riau Islands, the Chinese population was also engaged in tin mining, but most of them were wage-earning labourers rather than capitalists. The large

¹²¹ A complete list of the mining companies is provided by SMD (1966).

¹²² Closed in 1961. See West and Wang, *The Mineral Industry of Malaysia*, 1393.

¹²³ Production of tin ore of Johor in 1949 showed: 67 per cent from Europeans mines and 33 per cent from Chinese mines. See ARFM (report of mining industry) 1949, 11.

¹²⁴ ASTSIJB (1963).

investments in tin mining were from European capital.¹²⁵ Here, the mining industry was operated by the *Singkep Tin Maatschappij* (Singkep Tin Company) which obtained the only concession from the sultan for the mining industry in Singkep (1899, eight pits in Dabo and seven pits in Raija). In the early twentieth century, the company also extended its business to Karimun and Pulau Kundur to exploit tin.¹²⁶ Even though, the volume of tin smelted was insignificant. From July 1904 to June 1905, the Singkep Tin Company produced 6,007 piculs tin, 632 piculs coming from the company in Kedah (Malacca). In the 1920s, explorations were conducted in the Riau Islands for tin ore deposits. The spread of tin ores in Bintan and Batam was much wider than expected. Various other minerals were also found in the vicinity, and also in the Natuna Islands. Production of tin in 1920 amounted to 11,648 Straits piculs. Production of tin in 1920 amounted to 11648 Straits piculs and the average labour force was 646 men, all Chinese.¹²⁷ In 1933, the Singkep Tin Company was bought up by the Billiton Company, which had engaged in tin exploitation on the like-named island since 1860 by virtue of a government concession.¹²⁸ In the late 1930s, the *Nederlands-Indische Bauxiet Maatschappij* (Dutch East India Bauxite Company) started exploiting bauxite from its concession in Bintan.¹²⁹

The tin ore was first delivered by company ships to Bangka, from where it was transhipped to Singapore. Compared with Johor, production from the Riau Islands was rather limited. Nevertheless, it did suggest a connection with Singapore and this area. Mining was continued in the post-war period. In 1968, the production of bauxite from Bintan, entirely mined by state enterprise P.N. Aneka Tambang, amounted to 879,323 tons, as compared to 275,000 tons in 1940. Ninety per cent of the production was taken over by Japan, who showed growing interest in developing bauxite industries in Bintan. In 1972, some Japanese companies, including Sumitomo, Nipon Light Metal, and Showa Denka designed an alumina project on Bintan. Singkep mine was still in operation, producing around seven per cent of Indonesia's tin concentrate around 1970.¹³⁰

Forest production

One regional agricultural production with a non-Western character, but with some economic importance, was forestry, locally referred to as panglong industry, a

¹²⁵ Ng, *The Chinese*, 38.

¹²⁶ MvO: Riouw en onderhorigheden (1908).

¹²⁷ KV (1922), 322-7.

¹²⁸ Ibid. (1905), 277-8.

¹²⁹ Touwen, *Extremes*, 90.

¹³⁰ Esmara, 'An Economic Survey'.

timber-exploitation concern run by Chinese engaged in beam-cutting mills, sawmills, firewood mills, and charcoal-burning plants. Panglong enterprises had spread from the Riau Archipelago along the east coast of Sumatra and to the small islands off North Sumatra Residency and Sumatra's East Coast Residency, especially on the Bintan group and Karimun Island around Singapore as far back as the mid-nineteenth century. In the 1890s, many of these islands were deforested after three decades of exploitation.¹³¹ Nevertheless, in the Riau Islands, both numbers and output were still on a significant scale (Table 5.10).

Table 5. 10. Wood industry in Riau Residency in the early twentieth century.

	Beams	Firewood	charcoal
Indragiri		8	
Karimun	3		29 (75 ovens)
Kateman	16	4	
Tanjung Pinang			95 (182 ovens)
Lingga	3		64 (118 ovens)
Bengkalis	65	33	72 (200 ovens)

Sources: Cartor, *The Economic Position*, 217-20.

In Johor, a cursory inspection suggested that the Johor forests were exceptionally rich in valuable timber, if they were properly cared for.¹³² Most timber from Johor was exported, while some sawn softwood sawmills were imported from adjacent Sumatra (including the Riau Islands). All the timber enterprises were founded by Chinese, which shows their close relationship with the Riau Islands. These Chinese, like those in the Riau Islands, were also Singapore-based. One of them was Lee Keng Liat, who owned businesses both in the Straits Settlements and Johor, and who established the only sawmill factory in Muar, the Muar Steam Saw Mills. A Western factory also existed temporarily, the Johor Steam Saw Mills Company, set up by European timber merchants.¹³³ In the Riau-Lingga Archipelago, as well as in Inragiri, Bangka, and Bengkalis, Chinese *tauke* from Singapore exploited the forest, paying export duties on the wood and taxes on charcoal-burning facilities and labour.¹³⁴

¹³¹ Cator, *The Economic Position of the Chinese in the Netherlands Indies*, 217-8. See also, Erman, 'Tauke, Kuli dan Penguasa: Eksploitasi Hutan Panglong di Riau'.

¹³² JAR (1910), 9.

¹³³ STDS (1891), 293-4

¹³⁴ Touwen, *Extremes*, 91.

in operation, all Chinese-owned, employing Chinese labour and importing timber from Indonesia and Malaysia.¹³⁸

There is no doubt that the timber was all sent to Singapore instead of being processed locally or exported to somewhere else. Most Chinese panglong-holders were based on Singapore. These Chinese capitalists with their working capital resided in Singapore where they received a licence from the authorities for establishing a panglong. Personnel was recruited by panglong-owners in Singapore and sent out to the panglongs. Money and provisions were sent out from Singapore, in proportion to the amount of timber received. Labour conflicts were not rare, since the *tauke's* representative in Singapore often seemed far from friendly. It was this system that made many panglong-holders ignorant of the wretched conditions prevailing at the panglongs. Part of the timber output was sent to sawmills in Johor, creating the only significant connection between Johor and the Riau Islands.

Post-war panglong business in Johor and the Riau Islands did not show much change. A survey in 1949 shows that there were 37 sawmills with a total output of 60,000 cubic tons in Johor in the same year. Another Chinese plywood factory using rubber latex glue, the San Chee Seng Company, operated in Kluang. The output and labour force of the company were 180 cubic tons and 18 Chinese employees respectively.¹³⁹

In the Riau Islands, the number of wood enterprises was still at a high level (Table 5.11, Table 5.12). If there were some changes, the most important one was a certain disconnection between the three regions. Under national economic policies, many of the products were nationally oriented and consumed. Another change was seen in the organization of the timber industries. Different from small lumber camps and sawmills, the late 1960s and early 1970s also saw the beginning of large-scale extraction from the 10 large modern joint ventures.¹⁴⁰

Table 5. 11. Panglong industries in Riau in 1975.

Municipality	Pakan-baru	Kampar	Indragiri Hulu	Indragiri Hilir	Bengkalis	The Riau Islands
Sawing & processing of wood	4	4	1	3	31	9
Panglong, charcoal	-	-	-	-	58	65

Source: RdA (1975).

¹³⁸ TDAR (1960).

¹³⁹ ARFM (1949), 60.

¹⁴⁰ Esmara, 'An Economic Survey'.

Table 5. 12. Number of forest establishments in Riau, 1968-1971.

	1968	1969	1970	1971
Panglong - felling	39	160	189	29
Concession-request	9	20	38	8
-recommendation	-	-	29	33
-P.A.	3	3	10	10
-F.A.	1	-	8	10
-S.K.H.P.K.	3	2	7	9

Source: RdA (1975).

Supporting industries

Investment of capital in the services sector reflected forward linkages facilitating the export trade.¹⁴¹ In the triangle, this category of industries arose in Singapore, and included docking facilities, shipping repair companies, telegraph and gas companies, and engineering factories. Together with the development of agriculture and mining, these industries were diversified and extended to Johor and the Riau Islands. If capital invested in these industries in the colonial period showed a certain dependence on Singapore, the post-war development was different and more focused on the specific region.

Singapore

Pioneer European ventures were few in number and type, but underwent rapid growth in the following decades as a result of the agricultural expansion. In 1889, there were 53 manufacturing plants in Singapore, covering many branches. They represented large-scale capital investments and formed the mainstream of industrial development. The Singapore Gas Company was founded with a capital of £100,000, in 20,000 shares of £25 each, and 13 official staff in 1891.

The development of these European firms is revealed by the increasing number of personnel they employed and the expansion of new branches in other regions (Table 5.13).

¹⁴¹ Drake, *Currency*, 46.

Table 5. 13. Growth of European manufacturings in Singapore in 1891 and 1907.

	1891	1907
Tanjong Pagar Dock Company	70 official staff. 2 docks, 1 machine shop, 1 blacksmiths' shop, 3 wharves.	126 official staff and clerks. Departments of wharf, traffic, water service, coal, dockyard and workshop, engineer, etc.
The Eastern Extension Australasia and China Telegraph Company	57 official staff, Offices in Penang, Singapore, and Malacca.	113 official staff. Offices in Penang, Singapore, and Malacca.
Oriental Telephone Company	16 official staff.	19 official staff. Branches in 14 places in Asia. Local Offices & Exchanges – 'Telephone House' in Johor.

Source: STDS (1891, 1907).

In general, the development of manufacturing in Singapore was rather limited in the colonial period. All factories were in the hands of Westerners. An increasing number of companies were registered immediately after the Pacific War, which hints at an embryonic industrialization (Appendix xli). Nevertheless, the significant development was still confined to processing and engineering industries, especially in tin, rubber and oil milling.¹⁴² During the 1950s, there was encouragement to diversify from Singapore's traditional role as an entrepôt.¹⁴³ Nevertheless, the industrial sector was small, and its productivity was low. Manufacturing in 1960 accounted for only 11.4 per cent of the GDP; commerce was by far the largest sector, with a share of 32 per cent.

Singapore's serious attempt at industrialization began in 1961 when the Economic Development Board was established. Based on the Malaya market, a policy of import substitution was adopted from the start. A great effort was made by the government (1) to strengthen and widen the domestic market; (2) to strengthen and extend trading links with neighbouring countries in Southeast Asia and with countries outside the region; (3) to create conditions and basic facilities favourable for industrial growth; and (4) to offer inducements to private enterprises to establish and expand industries within the country.¹⁴⁴ Yet, this policy was abandoned in late

¹⁴² SYB (1947), 60-1.

¹⁴³ Huff, *The Economic Growth*, 33-4.

¹⁴⁴ Lim, *The Development of Singapore's Economy*, 14.

1966¹⁴⁵ due to the conflict of interests between Singapore and Malaya and the collapse of the common market scheme in 1965 which all made industrialization very difficult.¹⁴⁶ During the brief period of import substitution, reliance was put on private enterprise whose basic decisions were determined on the expectation of a common market with the Malay Peninsula. A system of import quotas was introduced for a limited number of goods, along with controls on how many enterprises could enter a particular field.¹⁴⁷

After the separation from Malaysia in 1965, the Singapore government argued that emphasis on heavy industry was a more effective stimulus to increase productivity and achieve long-range economic development.¹⁴⁸ The new approach became official policy in 1967 with the government proclamation of the Export Expansion Incentives (Relief from Income Tax) Act, and this was further enhanced by the 1968 Employment Act. The import substitution policy was succeeded by a strategy of promoting export-oriented, labour-intensive industrialization. At that time, the government began its central role in formulating and implementing the industrialization programme through the Economic Development Board. Foreign direct investment (FDI) was encouraged to help Singapore penetrate export markets and to bring in advanced technology (Appendix xl). Capital, especially from the USA, Britain, the Netherlands and Japan, contributed to the mushrooming of a large number of firms involved in the new 'secondary industries' producing manufactured goods for the markets of neighbouring countries.¹⁴⁹

These changes were reflected in the industrial structure (Appendix xxxviii, Appendix xxxix). High-growth industries in this period were textiles and electronics. The combination of spinning, weaving, knitting and finishing recorded a 63 per cent of the total growth in the period 1962-1972.¹⁵⁰ The petroleum industry also held a leading position. Historically, Singapore was a major storage and distribution centre for oil products from the oilfields in Sumatra and Burma, accounting for between 10 and 15 per cent of the trade of pre-war Malaya.¹⁵¹ Singapore's role as an oil-refining centre began in 1961, when Royal Dutch Shell opened the country's first refinery on the island of Pulau Bukom. Singapore's geographical location and the worldwide trend among international oil companies to locate refineries near rapidly growing

¹⁴⁵ Huff, *The Economic Growth*, 34.

¹⁴⁶ Yoshihara, *Foreign Investment and Domestic Response: A Study of Singapore's Industrialization*, 11-2.

¹⁴⁷ Lee, *The Monetary and Banking Development*.

¹⁴⁸ Kratoska, *The Japanese Occupation*, 21.

¹⁴⁹ Lee, 'Some Basic Problems of Industrialization in Singapore', 208.

¹⁵⁰ Yoshihara, *Foreign Investment*, 12.

¹⁵¹ Kratoska, *The Japanese Occupation*, 21.

markets were major reasons to invest in oil refining during this period.¹⁵² Two installations were constructed on the islands of Pulau Bukom and Pulau Sebarok serving as bulk terminals for the refineries in Indonesia and Sarawak. These two 'ocean' installations stored and blended refined oil products for transshipment elsewhere and ship bunkers. They also fed the bulk storage installations on the Pulau Bukom and a large proportion of Federation installations, owned by Shell and the Standard-Vacuum Oil Companies respectively.¹⁵³ From the late 1960s onwards, output in petroleum manufacturing accounted for the largest share of total output, although its growth rate was much less than that of textiles and electronics, and also slightly exceeded by shipbuilding and ship repairing.¹⁵⁴

In short, during the first two decades after the war, staying in the Federation and sharing a common Malayan market made it possible for Singapore to maintain already existing bilateral economic connections with Malaysia, but industrialization provided difficult to pursue. The manufacturing sector's success was largely a function of Singapore's ability to attract foreign investment through a favourable business climate providing investors with an educated, trained and disciplined labour force. This was realized by the adoption of an export-orientation policy in the late 1960s. In this process, domestic enterprises played a lesser role than foreign capital, as evidenced by Singapore's enlarged capital network and a deeper integration into the world market. Nevertheless, the small industries established by them still played an important role in providing employment for local labour.¹⁵⁵

Johor

Limited industries were also set up in Johor, where the Chinese played a considerable part. The bulk of local manufacturing (soap, motor tyres, rubber footwear, pineapple canning) was in Chinese hands. Steadily through the years, the Chinese became the leading economic factor, at first as labourers, followed in more recent times by ownership and direction of industry and to an important extent also in financing trading operations.¹⁵⁶ At the same time, the prosperity of plantation and mining industries generated large profits known as the 'export surplus,' which caused the Johor and colonial governments to attract capital back to the state. On the advice of D. G. Campbell, General Advisor to the Johor government in 1911, it was decided to greatly develop Johor's road and rail system in order to render vast areas of fertile land accessible and convenient for Singapore. Favourable terms would ensure that

¹⁵² Henriques, *Marcus Samuel: First Viscount Bearsted, and Founder of the 'Shell' Transport and Trading Company, 1853-1927*.

¹⁵³ CSAR (1956), 88, 109.

¹⁵⁴ Yoshihara, *Foreign Investment*, 12.

¹⁵⁵ Fang, *Small Industry in Singapore*.

¹⁵⁶ Beale, *A Review of the Trade of British Malaya in 1928*, 4.

much Singapore capital which hitherto had been sent further afield, would come to Johor. The slight progress made in the codification and publication of the laws in English had done much to establish the confidence of foreign capitalists.¹⁵⁷ Generally, before 1957, when Malaysia became independent, adherence by the British colonial government to the 'vent for surplus' export policy hindered the development of an industrial sector in the country. This was also the case in Johor.¹⁵⁸

After independence, industrialization came to be regarded as the means of generating productive employment and diversifying the economy. In 1957, the Malaysian government inaugurated a development policy to accelerate the process and pace of industrialization. Import substitution was the adopted strategy to achieve these objectives.¹⁵⁹ The production of primary activities created backward linkages, resulting in the production of parts and machinery for mining and processing, as well as small-scale service industries, which were all strengthened by a rapid growth of manufacturing production in the 1960s.¹⁶⁰ Nevertheless, the specialization of these manufacturers did not show much change compared to the situation in the colonial period. In spite of some battery, electronics, motorcycle, car and engineering manufacturers, the rest was dominated by food, beverages, textiles and biscuits. Although local firms had gained manufacturing experience during the colonial era, the government failed to nurture this entrepreneurial capacity and its policies undermined these enterprises.¹⁶¹ Non-Malay companies maintained a prominent presence in the economy and the owners of these enterprises were still not locally based, but came from Singapore and Britain.¹⁶²

Under the NEP from 1971, emphasis was placed on increasing economic opportunities for Malays. It sanctioned increased participation or interference by the state in the economy.¹⁶³ In order to accommodate the large inflow of FDI and new firms, seven EPZs (Export Processing Zones) were set up between 1972 and 1974 in Penang, Selangor, and Malacca. Many of these industrial estates and firms produced electrical machinery (electrical and electronic components) and textiles. The surge in FDI was short-lived. Between 1974 and 1975, approved investment fell by nearly 62 per cent. During 1974 and 1982, only two new EPZs were created, including Pasir Gudang/Johor Port Authority in Johor. It was hoped that the 'anticipated industrial restructuring in Singapore would channel export-oriented, labour-intensive firms

¹⁵⁷ JAR (1910), 18.

¹⁵⁸ Othman and Fong, *Johore Port*, 220.

¹⁵⁹ Ibid.

¹⁶⁰ Khera, *The Oil Palm*, 20.

¹⁶¹ Gomez, 'The Rise'.

¹⁶² SMD, 1966.

¹⁶³ Guinness, *On the Margin*, 32.

into Johor's industrial areas.'¹⁶⁴ In this process, the Malaysian Industrial Development Finance (MIDF), established in 1960 played a key role. One of its subsidiaries, the Malaysian Industrial Estates (MIE), constructed many factories units in Johor.¹⁶⁵

Nevertheless, supporting industries in Johor in the post-war period were still undeveloped. Although manufacturing today accounts for only about eight per cent of the gross national product, and for approximately seven per cent of the total employment, key economic indicators point to an impressive upswing over the past years.¹⁶⁶ According to Table 5.14, post-war industrial expansion still achieved some progress during the early period. The increasing number of established firms after 1970 was another good sign of the future.

Table 5. 14. Year of establishment of industrial firms registered in Johor, pre-1960 to 1982.

	Number	Percentage
Before 1960	10	12.2
1960-1964	7	8.5
1965-1969	18	22
After 1970	47	57.3

Source: Othman et al., *Johore Port*, 226.

The Riau Islands

By the beginning of the twentieth century it could be said that the whole Indonesian archipelago had been put under effective Dutch control, offering a favourable environment for the operation of a full-fledged and lucrative colonial economy with an infrastructure required to facilitate production and exports of primary commodities.¹⁶⁷ In addition, limited direct capital transfers took place, not to finance expansions, but to keep the export industries viable.¹⁶⁸ It is likely that supporting industries were rather lacking in the Riau Islands. These limited industries, did not lay the basis for sustained economic growth and successful transformation into a more diversified economy. The expansion of primary exports during this period was generally initiated and undertaken by Dutch and other Western enterprises, in which the Indonesian population only participated as unskilled workers. It was therefore not

¹⁶⁴ Sivalingam, *The Economic and Social Impact of Export Processing Zones: The Case of Malaysia*, 7.

¹⁶⁵ Lee, *The Monetary and Banking Development*, 195.

¹⁶⁶ *Straits Times*, 31 August 1965, Page 6.

¹⁶⁷ Thee, 'The Impact', 4.

¹⁶⁸ *Ibid.*, 8.

surprising that at independence in 1945, there was a widespread desire on the part of the Indonesian people to 'convert the colonial economy into a national economy.'¹⁶⁹

Although Sukarno on 1 July 1947 announced that all nations would be allowed to invest in Indonesia, including Dutch firms,¹⁷⁰ the unstable political environment and inconsistent government policies scared away foreign capital. Limited industries were set up in the post-war period by inexperienced local people and capital. Only from the 1970s onwards was there a sign of industrial development in the Riau Islands. This was done through the *Badan Otorita Batam* (BOB, Industrial Development Authority Batam Island) with the support of the Indonesia's favourable policy and Singapore's capital in 1973. The island became a support base for the state oil company in 1969 and in 1974 it became Indonesia's only Free Trade Zone (FTZ) under BOB.¹⁷¹ With the advantage of a favourable investment regime and cheap labour, it attracted investors from Singapore and gave encouragement to the multinational manufacturing of export goods.¹⁷² Under these conditions, an increasing number of foreign workers were recruited, showing certain integration with the outside world (Appendix xlvii).

Nevertheless, existing companies were still rather small in terms of capital and personnel. The slow development is indicated by the usage of machinery which was mostly applied in the processing industries and shipbuilding. For instance, in the early 1970s, of the total 61 wooden boat-building businesses in Riau, only eight of them used machinery. Only one of the eight was located in Tanjung Pinang, the Riau Islands, using just two machines: 60hp. and 10hp. respectively.¹⁷³ Many of these industries were still small-scale as indicated by the number and capacity of power equipment they used, and workers they employed. It is clear that medium-sized factories had a dominant position (Appendix xlv, Appendix xlv). The higher percentage of small factories in Riau, when compared to Indonesia in general, shows a slower development of manufacturing in these islands. Generally, factories in the Riau Islands in the post-war period were faced with a shortage of capital. Some of them submitted an application of bank credit. However, very few of them were successful.¹⁷⁴

To sum up, it has been argued that there was a limited development of manufacturing sector during the colonial period due to the policy of economic drain.

¹⁶⁹ Ibid., 18.

¹⁷⁰ Twang, *The Chinese Business Élite*, 128-9, 41.

¹⁷¹ www.bpbatam.go.id.

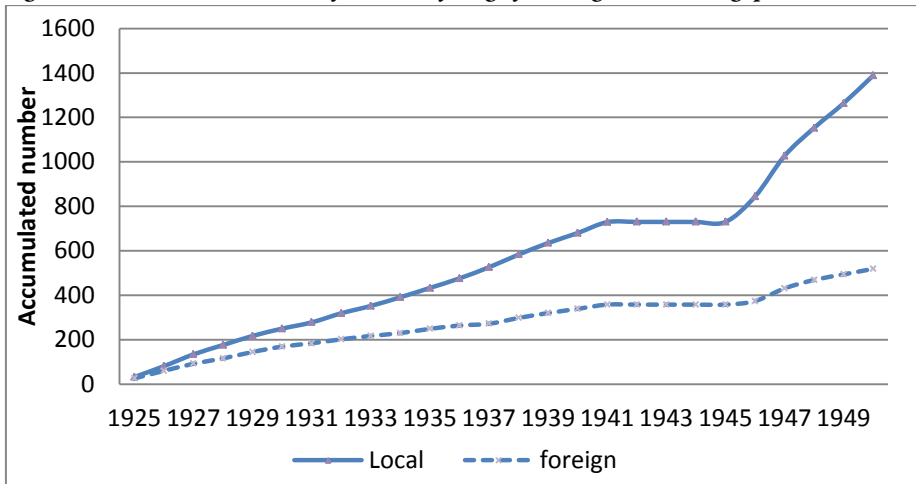
¹⁷² Royle, 'Industrialisation in Indonesia: The example of Batam Island'.

¹⁷³ Lampiran (1973-1974).

¹⁷⁴ Ibid.

However, there was still a significant development of manufacturing in Singapore, more than in Johor and the Riau Islands. In the colonial period, these industries were limited in type and scale. Many of them were a direct outcome of the establishment of backward and forward linkages. Processing industries were based on raw materials from the adjacent area, especially Johor and the Riau Islands, which, in turn, imported many of the products from food production factories in Singapore. This shows the close contacts within the triangle. These intensified industrial linkages were also indicated by the registration of companies in Singapore (Figure 5.3).

Figure 5. 3. Cumulative number of local and foreign firms registered in Singapore, 1925-1949.



Source: Appendix xlii.

Post-war manufacturing saw some individual developments in the three regions but also continuity with the colonial period. Significant industrialization did not take place until the implementation of governments' policies in the late 1960s to stimulate entry by foreign investment and establishment of capital-intensive manufacturing. Nevertheless, the manufacturing sectors in Singapore and Johor were more developed and diversified than in the Riau Islands. The rise of export-oriented industry in Singapore shows Singapore's lesser dependence on the raw materials from adjacent areas, resulting in loosening connections between the three regions.

In Indonesia, during Sukarno's 'Guided Democracy' from 1957 onwards, the exploitation of Indonesia's natural resources was largely left to state-owned enterprises.¹⁷⁵ Since government enterprises during Guided Democracy were concentrated in Java, manufacturing development in the Riau Islands did not achieve much progress. This feature only began to change from the 1970s, when under the

¹⁷⁵ Thee, 'The Impact', 20.

New Order government much greater reliance was placed on private enterprises and foreign companies to exploit natural resources.

With regard to capitalists, Europeans held a leading position in manufacturing development in the colonial period in Singapore. Their dominance, however, met with great competition from the Chinese in Johor and the Riau Islands, whereas Malays, especially Malay smallholders, gradually gained more importance after the war. Another group, the Japanese, also played an important part, particularly in mining in Johor and machinery manufactures in the Riau Islands. The intensive business activities of Westerners and Chinese indicate strong connections both outward and internally, while the Malay dominance in the post-war period was more internally-oriented.

3. Financial Services

The service sector primarily consists of various departments including truck transportation, messenger services and warehousing; information sector services; financial investment services; rental and leasing services, scientific and technical services; administrative and support services; arts, entertainment and recreation services, etc. During the period under study, most of these services did not gain much significance. Only financial services obtained limited development but with a great impact on the entire region. This section hence focuses on the development of regional banking and insurance services. It begins with a survey of regional currency which serves as the foundation of regional financial service.

Currency¹⁷⁶

As early as the 1840s, Singapore was already a prosperous financial centre and the European and Chinese merchants there were beginning to look to the peninsula as a field for investing their trading profits.¹⁷⁷ Before going into the details of these investments, it is necessary to look at one important premise: currency. Currency policy was the exclusive domain of the government and not part of commercial services. Yet it was crucial in creating an environment conducive to investment of capital.

For much of the nineteenth century, Spanish and Mexican dollars were the major currencies used for business in the Straits Settlements. In addition, various dollar strikes including the USA and Hong Kong dollars, also served as legal tender in the second half of the nineteenth century. This remained in force until 1904 when the Straits dollar became the sole legal tender in the Straits Settlements. It was divided

¹⁷⁶ Exchange rates of different currencies see Appendix xxxiv, Appendix xxxv.

¹⁷⁷ Kratoska, *The Japanese Occupation*, 20.

into 100 cents. In 1906, it was pegged at a fixed price at 2 shillings 4 pence sterling. The Straits dollar was also used in both the FMS and UMS (Unfederated Malay States).¹⁷⁸ In 1939, it was officially replaced by the Malayan dollar which was issued by a Board of Commissioners of Currency established under an agreement signed in 1938 by the governments of the Straits Settlements and the Malay States.¹⁷⁹ During the Japanese occupation, the Japanese government-issue dollar replaced the Malayan dollar as legal tender. After war, the Malayan dollar was restored, but it was quickly replaced by the Malaya and British Borneo dollar in 1953, used until 1965 when Singapore achieved independence from Malaysia. The Singapore dollar and Malaysia dollar then became legal tender in Singapore and Malaysia respectively, both at a rate of S\$60 = £7 until the early 1970s.

In the Netherlands Indies, the monetary system was in a state of great chaos and confusion until the introduction in 1817 of the Netherlands Indies guilder (NIG) with the same intrinsic value as the Dutch guilder. In the following decade, the NIG experienced a serious depreciation. In 1877, the Netherlands Indies also introduced the gold standard, but the exchange rate of the NIG to other currencies still fluctuated dramatically.¹⁸⁰ At the same time, other currencies and copper coins were also universally used throughout the colony. This was especially so in the Riau Islands, not only because of its peripheral position in the Netherlands Indies, but also because of its close connection to Singapore. The dependence of regional trade and shipping on Singapore brought no problem for the circulation and payment of dollars.¹⁸¹ Moreover, these Singapore dollars with fixed value had more advantage than the unstable NIG. The regional Dutch colonial currency had been replaced by the Straits dollar when introduced in the early nineteenth century. The exchange rate was set up at S\$100 = f.1425. The conversion rate was quite high, and rose fast in the following years. In the Riau Islands, for those who were paid by the government in NIGs, this was a disadvantage. As a result, the local currency gradually disappeared and the Straits dollar widely circulated.¹⁸² The prevalence of the Straits dollar thus became an obstruction for regional trade and resulted in the Riau Islands' economic dependency on Singapore. The Dutch colonial government took some measures to restrict the circulation of Straits dollars in the early twentieth century. In the Riau Islands, the Straits dollar was officially replaced by the NIG in 1909.¹⁸³ However, the continuous

¹⁷⁸ Denzel, *Handbook of World Exchange Rates, 1590-1914*, 537-9.

¹⁷⁹ ARFM (1949), 35.

¹⁸⁰ Denzel, *Handbook*, 545-6.

¹⁸¹ Potting, *De ontwikkeling van het geldverkeer in een koloniale samenleving: Oostkust van Sumatra, 1875-1938*, 340.

¹⁸² MvO: Riouw en onderhorigheden (1908).

¹⁸³ Potting, *De ontwikkeling*, 116.

depreciation of the NIG¹⁸⁴ still encouraged the unofficial circulation of the Straits dollar.

During the Japanese occupation, the military government brought a replacement currency, the gulden (Japanese dollar) to Indonesia. Nevertheless, under the Japanese administration and the economic influence of Malaya, the 'Japanese dollar' was used more widely. The same pattern also applied in the late 1940s when Indonesia's own currency was not recognized by the international market. Therefore, the Malaysian currency was more used here. During the 1950s and 1960s, the Straits dollar of British Malaya was the principal currency. Even when the Indonesian rupiah became legal tender, the Riau rupiah was used as a distinct currency in the Riau Islands in 1963 and 1964 due to restrictions and instability of the rupiah in the first two decades after independence.

Although the Riau Islands were geographically and politically separated from the Malay Peninsula, the regional cross-border monetary system showed many internal connections which facilitated the flow of capital invested by Europeans, Chinese, and Malay capitalists. The great influence of Singaporean Chinese, in these regions is shown by the fact that almost all the bookkeeping used Singapore dollars as its currency. The tax regulations often strike difficulties in preventing profits from flowing overseas because the administration is entirely or partly based in Singapore.¹⁸⁵

Banking and insurance companies

The expansion of the regional export economy was accompanied by the emergence of European banks which were engaged in the financing and promoting of trade and shipping between Pan-Malaya and the metropolitan countries.¹⁸⁶ The pioneer of the banking business was the Chartered Bank of India, Australia and China (informally, the Chartered Bank), which opened its Singapore branch in 1859, only six years after its incorporation. However, the establishment of banks opened in Singapore in the nineteenth century was still quite limited and characterized by two facts: (1) a complete dominance by European capital and (2) difficult operations due to the limited scale of capital gained from the agricultural sector.

¹⁸⁴ Thee, 'The Impact', 15.

¹⁸⁵ Fernando and Bulbeck, *Chinese Economic Activity*, 215.

¹⁸⁶ Lee, *The Monetary and Banking Development*, 34-7.

Table 5. 15. Early establishment of banks in Singapore in 1891 and 1907.

1891	
Chartered Bank of India, Australia and China	31 clerks, 18 agencies and branches, paid capital: £800,000, reserve fund: £250,000
Chartered Mercantile Bank of India, London and China	27 clerks, 15 agencies, 13 branches, paid-up capital: £750,000, with power to increase to £1,500,000, paid-up capital: £250,000
HSBC (Hong Kong and Shanghai Banking Corporation)	36 clerks, 8 agencies, 23 branches, paid-up capital: \$10,000,000, reserve fund: \$5,482,127
New Oriental Bank Corporation, Limited	19 clerks, 5 agencies
1907	
Banque de L'Indo-Chine	-
Chartered Bank of India, Australia and China	51 clerks, 27 agencies and branches, paid capital: £800,000, reserve fund: £975,000
International Banking Corporation	16 branches, capital: gold \$3,250,000
Deutsch-Asiatische Bank	-
HSBC	49 clerks, 4 agencies, 27 branches, paid-up capital: \$10,000,000, reserve fund: \$21,000,000
Mercantile Bank of India, Ltd.	32 clerks, 18 agencies and branches, authorized capital: £1,500,000, subscribed capital: £1,125,000, paid-up capital: £562,500, reserve: £135,000
NHM (<i>Nederlandsche Handel-Maatschappij</i>)	40 clerks, 18 agencies, 19 branches, capital: f.45,000,000 (£3,750,000), reserve fund: f.5,000,000 (£417,000)
Nederlandsch Indische Handels Bank	13 clerks, 8 branches
Russo-Chinese Bank	-

Source: STDS (1891, 1907).

In the early twentieth century, long-established banks kept expanding and new banks mushroomed in the tiny island of Singapore as a result of rapid Western capital penetration in this area (Table 5.15). The flourishing of rubber estates particularly stimulated the development of the banking system, which gradually replaced the private companies in providing support in the form of financial loans to the estates.¹⁸⁷ As the Malayan estates kept growing, so branches of these banks were

¹⁸⁷ Drabble, *Rubber*, 67.

established across the peninsula. The Chartered Bank was first European bank to establish agencies in the Malay states, in Taiping in Perak and Kuala Lumpur in Selangor in 1888. Yet, these banks did not give short-term loans to planters.¹⁸⁸ Later on, banks opened up in Johor to fulfil demand from the rubber estates. Nevertheless, European banking activities were still limited. By 1949, there was only one Western bank in Johor – the HSBC, which had branches in Johor Bahru and Muar.¹⁸⁹

Mainly on the basis of the tin and rubber industries, many Chinese capitalists also showed an interest in banking. This originated from their pawnshops which provided money loans to smallholders, following in the step of the Europeans. The Kwong Yik Bank was established in 1903, being the first banking institution in Singapore run by the Chinese.¹⁹⁰ In the 1910s, more Chinese banks were set up, including the Chinese Commercial Bank Ltd. (in 1912), the Ho Hong Bank (in 1917), and the Oversea-Chinese Bank (OCB, in 1919). Different from the European banks' outward orientation, the Chinese banks focused more on regional business. They were reluctant to engage in the finance of estates, confining themselves to making short-term advances secured against stocks of rubber.¹⁹¹ One of the promoters of the Kwong Yik Bank, its founder Wong Ah Fook, left Hong Kong in 1851 at the age of 16. After a few years, he became one of the most successful contractors in Johor. Then he turned his attention to the state, and devoted all his energies to help open the country, and many of the buildings both in town and country were built by him.¹⁹² The Ho Hong Bank was also the main financial supporter of rubber and tapioca estates in Johor. When auctioned in 1922, it was the owner of several estates in Johor: Eng Tech San Rubber and Tapioca Estates (985 acres), Gowthia Rubber Estates, Pasir Gudang (978 acres). In 1932, the three above-mentioned Chinese banks merged to found the Oversea-Chinese Bank Corporation (OCBC) after the economic depression in the late 1930s. It became the largest Chinese bank in Singapore, with branches in Johor Bahru, Muar and Segamat. There were also some smaller Chinese banks set up in Johor. The Batu Pahat Bank was a small bank operating in Batu Pahat, on Johor's west coast, in 1920. After subsequent reorganization, it became the Pacific Bank and was incorporated by the OCBC in 1963, becoming a subsidiary of the OCBC.

Banks established by other ethnic groups also mushroomed from the 1920s. There were local Indian banks in response to the Indians who were active in textile

¹⁸⁸ Ibid., 56.

¹⁸⁹ ARFM (1949), 38-9.

¹⁹⁰ Song, *One Hundred Years' History*, 353.

¹⁹¹ Drabble, *Rubber*, 70.

¹⁹² Ibid., 354.

distribution, the import business and money lending.¹⁹³ Two Japanese banks were active in the inter-war period, the Bank of Taiwan and the Yokohama Specie Bank.¹⁹⁴ There is some hesitation about mentioning banks in the Riau Islands, because there were no serious banking activities in the colonial period. Although both the NHM and *De Javasche Bank* (DJB) played an essential role in conducting financial activities in Indonesia, none of their branches were located in the Riau Islands.¹⁹⁵ Because of limited money supply in the Netherlands Indies, there was little incentive for commercial banks and international banks to establish their branches there.¹⁹⁶ Except for a small part of mainland Sumatra, mainly Medan,¹⁹⁷ most of the money supply relied on Singapore, where both the NHM and DJB had opened branches.¹⁹⁸ Other funding was arranged by large private enterprises, for instance the BPM when constructing and operating the distribution centre of Pulau Sambu. There were also a few Chinese operating their pawnshops but with very little importance. Sometimes, *chops* and other types of firm also played a similar role as banks for providing credit, loans, remittances, etc. Probably this was the only bank connection between Singapore and the Riau Islands because small Chinese capitalists in the Riau Islands owned properties in Singapore. This capital link kept changing in the post-war period.

Accompanying by the growth of the banking system was the rise of insurance companies. In 1891, around five insurance companies were operating in Singapore. It increased to 14 after 16 years. Similarly, Chinese capital was rather difficult to find (Appendix XXXVII).

Several decades later, during the Japanese occupation, all these financial institutions suffered great losses. They were either closed or taken over by the Japanese. After the war, they were faced with the task of reestablishment, reconstruction and rehabilitation. In 1947, a total of 18 banks were conducting their business in Singapore: 10 foreign and eight Chinese. Among them, two local banks were newly opened in that year by the Chinese: the Overseas Union Bank and the Chung Kiahw Bank. There were also another two Chinese banks established later: the Industrial and Commercial Bank (in 1953), and the Bank of Singapore (in 1954). An increasing number of new foreign banks also came to the island, such as the *Algemene Bank Nederland* and Bank of America. Some Malaysian banks also appeared: the Malayan Banking and United Malayan Banking Corporation.

¹⁹³ Lee, *The Monetary and Banking Development*, 34.

¹⁹⁴ *Ibid.*, 42.

¹⁹⁵ Potting, *De ontwikkeling*.

¹⁹⁶ CEI, vol. 6, 30,

¹⁹⁷ Andere muntsoorten. De Sumatra post 24-03-1939

¹⁹⁸ De Toekomst van Riouw. Bataviaasch nieuwsblad 20-05-1911

This was also the time for the establishment of Malay banks. Nevertheless, successful Malayan banking operations only began after the establishment of Bank Bumiputra in 1966 by the Malaysian government.¹⁹⁹ Previous networks had been destroyed, especially during the period of conflict between Indonesia and Malaysia, when many branches were closed. Post-war financial connections within the triangle left no room for the Riau Islands. Independence gave a further impetus to the growth of local banking in both Singapore and Malaysia (Table 5.16). Among them, the United Malayan Banking Corporation had already set up its branches in various places in Johor: Johor Bahru, Muar, Segmat, Batu Pahat, Yong Peng in 1966. The difference is that, in Singapore, these banks were mainly incorporated by ethnic Chinese, whereas in Malaysia, the Malaysian government provided widespread banking services to the Malays and aroused their interest in banking business and management.²⁰⁰

Table 5. 16. Distribution of commercial bank offices in Singapore and Johor, 1962-1971.

	1962	1965			1971
		Local	Foreign	Total	
Singapore	94	78	55	133	-
Johor	24	25	2	27	32
Total Malaya and Singapore	275	260	150	410	343

Source: Lee Sheng-Yi, *The Monetary and Banking Development*, 157, table 7.7.

Therefore, financial developments in the triangle were unbalanced with a strong financial centre at Singapore and financial development in the other two lagging behind, especially in the Riau Islands. Banks in Singapore were mainly operated by Europeans and Chinese both in the colonial period and the post-war era. Nevertheless, the distinction between them was clear. The large scale of European banks resulted in a focus on creating an international network which connected Singapore to the global economy, whereas the Chinese banks connected Singapore with Johor and the Riau Islands through their financing of smallholders. Chinese banks usually relied for credits on Europeans, which shows close connections between these two ethnic groups. This pattern was characteristic of the situation in the colonial period. After achieving independence, guided by individual government policies, a differentiation took place. Financial development in Singapore became

¹⁹⁹ Lee, *The Monetary and Banking Development*, 34.

²⁰⁰ *Ibid.*, 345.

more outward-oriented than before. By contrast, in Johor and the Riau Islands, although there was encouragement for local Malays to participate in banking, financial services remained underdeveloped. Post-war financial connections within the triangle were different from those of the colonial period.

4. Overall pattern of regional capital investment

This chapter focuses on the development of three economic sectors represented by agriculture, manufacturing and financial services, which opened up an era of spectacular prosperity for this region. In the colonial period, the lack of a primary sector forced the development of manufacturing and finance in Singapore to a considerable degree based on the expansion of commercial agriculture in adjacent areas, such as Johor and the Riau Islands. After achieving independence, these two sectors in Singapore kept expanding, but the development was based on import substitution policies and incoming FDI. In Johor and the Riau Islands, commercial agriculture formed the mainstay of the regional economy, whereas the manufacturing and finance did not gain much significance until the 1970s.

Generally, all ethnic groups participated in the formation of regional economies. Western capitalists dominated international enterprises, whereas the Chinese capital concentrated on regional production and transportation. Judged by their economic significance, the Europeans, Chinese and Japanese played a more important role in the colonial period, whereas local people gained more importance in the post-war period. Determined by the character of these ethnic groups, the regional economic connections showed certain dynamics. The Europeans and Japanese were regarded as international factors connecting this region to the international market. Therefore, during their heyday in the first half of the twentieth century, the outward connections of this area were very strong, not only through Singapore, but also to some extent through Johor and the Riau Islands themselves. The Chinese, on the other hand, engaged more in the creation and maintaining of a regional network. Based on Singapore, many of them set up plantations, industries and small banks both in Johor and the Riau Islands. Thus, the colonial period was characterized by both strong international and strong regional connections.

Sources about capital investment of Singapore in Johor after the Pacific War are scarce. Still, it is possible to show that capital linkages between Singapore and Johor were weaker than before. The difference is partially the result of a difference between domestic investment in the colonial period and foreign investment in the post-colonial period, which may be ascribed to the difference in political regime, and government policies towards industrialization in the post-war period. Singapore relied more on foreign inputs, while Johor and the Riau Islands gave preference to Malays. In Singapore, European and Chinese took economic initiatives that guaranteed growing international connections with the world market. By contrast, these outward connections were weaker in Johor and the Riau Islands, although

Japanese investment on a limited scale was observed. With regard to internal connections within the triangle, they were rather loose compared to the previous period. Priority was given to local Malays, both in Johor and the Riau Islands. The indigenous had considerable political influence, but lacked a solid capitalist foundation, business culture, and skills. It was a weak bourgeoisie.²⁰¹

Based on Porter's Diamond Model, the factor of related and supporting industries is discussed in this chapter. Assignments after standardization are shown by Table 5.17.

Table 5. 17. Standardized assignments of related industries in Singapore, Johor and Riau Islands by period, 1870-1970.

	1870-1910 Early imperialism			1910-1940 High colonialism			1942-1945 The Pacific War			1945-1970 Decolonization, independence		
	S	J	R	S	J	R	S	J	R	S	J	R
	<i>Agroprocessing</i>	1.2	0.8	0.4	2.4	1.6	1.2	0.4	0.4	0.4	3.2	4
<i>Forestry industry</i>	0.4	0.8	0.8	1.2	2	1.6	0.4	0.8	0.8	2	4	3.2
<i>Supporting industry</i>	0.8	0.4	0.4	2.4	1.2	0.8	0.8	0.4	0.4	4	2.4	1.6
<i>Banks</i>	0.8	0.4	0.4	2.4	0.8	0.4	0.4	0.4	0.4	4	2	0.8
<i>Insurance companies</i>	0.8	0.4	0.4	2	0.8	0.4	0.4	0.4	0.4	3.2	1.2	0.8
<i>Mean value</i>	0.8	0.6	0.5	2.1	1.3	0.9	0.5	0.5	0.5	3.3	2.7	1.8

5. Overview of individual performance

The development of trade, shipping and capital investment in this region displayed a dynamic process during the period under discussion. Based on political change, a periodization was devised to examine the economic performance of the three regions in the areas of political and ethnic relations, and the role of different ethnic groups in conducting regional economy.

The socio-political aspect is to reveal the environment of economic development in the three regions. Regarding political relationships within the triangle, according to political transformation and mutual relationships between the governments, these relationships showed distinct patterns. During the colonial period from 1870 to 1942, the political relationship of the three regions was reflected by the relations between two colonial governments: the British and the Dutch. In

²⁰¹ Robison, *Indonesia: The Rise of Capital*, 13.

general, the Anglo-Dutch relationship in the east showed a competitive pattern. Although the kinship between two existing Malay kingdoms – Riau-Lingga Sultanate and Johor State – created another connection in the political sense, this relationship was rather unimportant due to the weakness of Malay authority. During the short period of Japanese occupation, the Japanese military administration indicated a ‘unified’ political relationship between Singapore, Johor and the Riau Islands, but such ‘unification’ was unstable and temporary. The post-war political relationship between the three regions was characterized as a rivalry attributed to rising nationalism, the separation of Singapore from the Federation of Malaysia in 1965 and the Indonesian-Malaysian Confrontation between 1963 and 1966. The relationship later improved, especially after the establishment of ASEAN in 1967.

Regarding socio-ethnic relationships in such a multi-ethnic region, social structure and ethnic relationship have a direct impact on regional economic development. In the period of early imperialism, both the Europeans and Malay nobles possessed political advantage, whereas the Chinese played a more important role in regional agricultural plantation, trade and shipping. Their complementary importance resulted in a cooperative relationship between them. In the early twentieth century, Malay rulers faded out due to aggressive European penetration, facilitating European expansion in the economy. Therefore, the Chinese-European relationship was both cooperative and competitive. At the same time, Chinese were also used by the Europeans to keep balance between the British and Dutch, another sign of ‘reciprocity’. There was also a growing importance of Japanese capital and capitalists engaged in rubber plantations and mining in Johor. The regional socio-ethnic relationship during the Japanese occupation was full of tension, especially between the Japanese and the Europeans. The Japanese needed the Chinese to maintain existing connections. A regional deviation took place in the post-war period. In Singapore, the Europeans, the Chinese and Japanese continued to be economically important, whereas in Johor and the Riau Islands, preference was given to the Malays. This resulted in full participation of all ethnic groups in Singapore but a rivalry between Chinese and Malays in Johor and the Riau Islands. In general, there was a clear dichotomy as indicated by Europeans and Japanese in external connections and the Chinese in internal connections. This dichotomy was not static. There was a European expansion into internal connections and the Japanese gained a growing importance in external connections. Although post-war policies were more in favour of Malays, the Chinese still played a key role in defiance of government policies, especially in the Riau Islands.

In order to make good comparison of the individual growth of population, trade, shipping and capital investment, we have to standardize the quantitative numbers of growth rate per annum: <1.5% – VL (Very Low); 1.5-3% – L (Low); 3-5% – H (High); >5% – VH (Very High).

Both in Singapore and Johor, population growth rates per annum were higher in the colonial period (above 2.9%) than after achieving impendence (ca. 2.4%), whereas in the Riau Islands, an accelerated process was shown throughout the research period, increasing steadily from 1% to 3%. There was also regional differences in the sense that population growth rates were far higher in Singapore and Johor than in the Riau Islands.

Different from population growth, trade expansion in the three regions followed separate paths. Both in Singapore and Johor, a high growth rate per annum was achieved (3.3% and 3.7% respectively) in the period of early imperialism. But a deviation took place during the period 1910-1940. The growth rate per annum was high (3.1%) in Singapore, but very high (7%) in Johor, suffering no negative influence from the world market. Recovery took place immediately in Singapore after the Pacific War with a record growth rate of 7.8% per annum, whereas in Johor, the growth rate was below pre-war levels, at only 5%. The Riau Islands told another story. Trade development started from a very low level with an average growth rate of 1.3% per annum during the period 1870-1910. In the following decades, the path of the Riau Islands' trade expansion was similar to that of Johor, but at lower growth rates: very high (6%) during the late colonial period and low from the 1950s.

Regarding shipping development, in general, the three regions followed a trajectory similar to that of trade expansion but at higher growth rates per annum. In Singapore, the average growth rates of number of vessels per annum in the three classified periods of early imperialism, high colonialism and independence are estimated at 4.9%, 0.4% and 4.6% respectively, but in terms of total tonnage, they are recorded at 6.2%, 2.4% and 6.8%. This differentiation is also applied to Johor and the Riau Islands. This is because shipping development is assessed by total tonnage rather than numbers of ships. The higher growth rate is consequently amplified by technological progress. In general, shipping development in Johor and the Riau Islands lagged behind Singapore with the only exception in the period of high colonialism, when a very high growth rate was achieved in both Johor and the Riau Islands.

The growth rate of capital investment is difficult to standardize in the three regions, so we have to take into consideration all three sectors of the economy. Nevertheless, the spatio-temporal differences are suggested by the registration of companies. There is no doubt that capital- and technology-intensive and financial industries gained importance above labour-intensive and traditional agricultural production. From this point of view, capital investment started at a low level in Singapore but very low in Johor and the Riau Islands. In the following decades, the process was accelerated in all three regions, particularly in Singapore. The gap between them can be understood as differences in industrialization, transformation

of the industrial structure, and utilization of FDI, especially after independence. Therefore, we consider the capital investment in the three regions as follows: very high in Singapore, high in Johor, low in the Riau Islands.

To sum up, during the war and revolutionary period both economic development and population growth suffered serious decline, whereas in the periods of high colonialism and immediately after independence the performance was far more successful. Nevertheless, economic progress in the two periods had different reasons. During the first half of twentieth century, it was characterized by participation by non-Malay ethnic groups, especially Europeans and Chinese. They maintained their importance in post-war Singapore, but lost their economic predominance in Johor and the Riau Islands, where, instead, Malays gained more economic authority.

6. Overview of joint performance

The joint performance of regional economy is analysed in Porter's Diamond Model, which also explains their internal relations. Three of the factors in the model have been discussed above with the exception of factor conditions. The evaluation of factor conditions relies on empirical studies and current historiography. Generally, Singapore's advantage was reflected in its geography, infrastructure, knowledge, whereas Johor and the Riau Islands were more advantageous in natural resources, available land and labour. Assignments after standardization are shown by Table 5.18.

The synthesis of the assignments and the calculation of individual competitive advantage are displayed by Table 5.19. Results are tentative, but they do reveal a large gap between Singapore, Johor and the Riau Islands in terms of economic development in accordance with their individual competitive advantage.

- In general, Singapore possessed the most competitive advantage among the three.
- Except for the Pacific War, which brought a sudden interruption, there has been a gradually intensified and accumulated competitive advantage both in Singapore and Johor. This advantage was reinforced by political stability, liberal economic policies and the effectiveness of government administration ($\lambda \geq 1$).
- By contrast, the Riau Islands with a lower value by the four variables was already lagging behind Singapore and Johor at the start. Gloomy conditions in the Riau Islands were further worsened by the poor performance of the government ($\lambda < 1$) much of the time. The highest value of competitive advantage of the Riau Islands was in the period of high colonialism due to a relatively effective government administration.

Table 5. 18. Standardized assignments of factor conditions in Singapore, Johor and Riau

Islands by period, 1870-1970.

	1870-1910 Early imperialism			1910-1940 High colonialism			1942-1945 The Pacific War			1945-1970 Decolonization, independence		
	S	J	R	S	J	R	S	J	R	S	J	R
<i>Geographical location</i>	4	3	2	4	3	2	4	3	2	4	3	2
<i>Natural resources</i>	1	4	3	1	4	3	1	4	3	1	4	3
<i>Available land</i>	3	4	3	2	4	3	2	4	3	1	4	3
<i>Labour</i>	2	1	1	2	3	2	-	-	-	2	2	2
<i>Infrastructure (× 2)</i>	0.8	0.4	0.4	2.4	1.2	0.8	2.4	1.2	0.8	4	2.4	1.2
<i>Knowledge, technology (× 2)</i>	1.2	0.8	0.4	2	1.2	0.8	2	1.2	0.8	2.8	1.6	1.2
Mean value	1.8	1.8	1.3	2.2	2.4	1.7	2.3	2.3	1.6	2.7	2.6	1.9

Table 5. 19. Regional competitive advantage of Singapore, Johor and Riau Islands by period, 1870-1970.

	1870-1910 Early imperialism			1910-1940 High colonialism			1942-1945 The Pacific War			1945-1970 Decolonization, independence		
	S	J	R	S	J	R	S	J	R	S	J	R
Factor conditions (× 1)	1.8	1.8	1.3	2.2	2.4	1.7	2.3	2.3	1.6	2.7	2.6	1.9
Demand conditions (× 2)	0.9	0.5	0.5	1.9	1.2	1	0.6	0.4	0.4	3.2	2.5	1.7
Social structure (× 2)	2.7	2.1	1.7	2.9	3.1	1.9	0.7	0.7	0.7	3.9	2.9	1.6
Related industries (× 3)	0.8	0.6	0.5	2.1	1.3	0.9	0.5	0.5	0.5	3.3	2.7	1.8
Mean weighed-value of four variables (\bar{P})	1.6	1.3	1	2.3	2	1.4	1	1	0.8	3.3	2.7	1.8
Government (λ)	1.7	1.0	0.6	2.0	2.0	1.2	0.4	0.3	0.3	2.0	1.7	0.7
Competitive advantage ($\bar{P} \times \lambda$)	2.7	1.3	0.6	4.6	4	1.7	0.4	0.3	0.2	6.6	4.6	1.3

In terms of internal connections within the triangle, the strength was also in accordance with the factor of 'government'. Theoretically, the formation of their internal connections are due to both individual competitiveness and regional complementarity, reflected by (1) world demand for regional raw materials transhipped through Singapore; (2) creation of backward linkages in Singapore as a result of exports from the hinterland of Johor and the Riau Islands; (3) development of finance in Singapore to provide capital for Johor and the Riau Islands; (4) the role of traders, shipowners and capitalists in materializing the connections. There was a spillover effect from Singapore in establishing such connections to Johor and the Riau Islands. This effect was subject to political determination and government policies. During the Japanese occupation, the internal connection was politically strong but economically weak. The strongest economic internal connections appeared in the first half of the twentieth century when the factor of 'government' had a positive impact.