

Tin Mining Activities and Sustainability of Mining-Based Cities in Peninsular Malaysia

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Abstract

Tin mining industry in Peninsular Malaysia has opened vast areas in a short time span and many small towns grew and some expanded into bigger towns in the era of British Malaya, from the mid of the 19th century. Taiping, the first town being developed was left deteriorated when her tin reserves depleted and the tin mining industry shifted to major reserved areas in Kinta Valley and Ipoh took over as the major town in Perak back then. With the decline of tin mining industry after the 1970s, many other towns grew in Kinta Valley could not expand as they were too dependent on the tin mining industry. However, mining industry in Klang Valley did not have bigger reserves compared to Kinta Valley. Mining depletion occurred much earlier and it has forced the government to find alternatives into manufacturing and service industries which have been successful in making Kuala Lumpur and many other towns in Klang Valley that continuously expanding until at present.

I. Introduction

City acts as a central to all forms of economic activity, administrative, political, cultural, education, research and innovation. However, the roles of a city depend on a country's level of development where the city is located and also by how it is formed. There are cities that continue to thrive until it becomes the main centre of the country, and there are also cities which still exist but do not grow and continue to dim and eventually disappear. This phenomenon can be seen in Malaysia if recalled to the growth of towns back then which were once formed due to the progress of the mining industry. However, the tin industry in this country did not last long, as after more than 150 years the industry was likely to come to an end. Some of the cities which have been formed from the industry are now lost, dim, and experiencing a slow progress but there are also cities that experience rapid growth to form an urban area or an urban region. This article recalls the development of cities in Malaysia since the for-

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mation of a number of towns and cities for the first time due to the development of tin mining and the positions of these towns today by having Kinta Valley and Klang Valley as a case study.

II. Methodology

The information for the population and population census for cities in Malaysia as a whole is taken from Population Census which is derived from Department of Statistics Malaysia. In addition, the information that includes the history and urbanization that take place in Kinta Valley and Klang Valley as well as the elements required in this article is also obtained through secondary source. The secondary source that is used to obtain information for this article is the historical documents.

III. Towns during the era of pre-mining tin ore

The opening of Malacca by Parameswara and next, the international trade through port activities had contributed to the initiation of the process of urban development in Malaysia through the construction of centred settlements which was focusing on Sultan's Palace as the administrative centre and surrounded by the Malay fishing village. The central location which was situated on the seaside managed to become an international trading port during that time. Hence it was said to be the Southeast Asia's trade emporium¹⁾. Initially, the international trade between Malacca with Sumatra and Java has subsequently led to the influx of traders

from the Middle East and India to witness the practice of Islam in the Malay Peninsula. These international traders have formed a new life pattern of a city, which was said to have differences from the livelihoods of the surrounding villages around Malacca²⁾.

The harbor had ignited a fight of struggle between the Portuguese and the Netherlands which afterward increased the port role of Malacca as the main urban centre in Malaya. The exploration of international traders to other areas of the Malay Peninsula resulted in the existence of ports that were also the city centre during that time in Kedah, Selangor and Johor. However, the existing settlement centres did not serve more as port cities that gave priority to international trade activities without forming local business centres that could grow into cities as they are today.

The local people around these ports gave priority to agriculture as their main quest. The opening of Penang by Francis Light in 1786 had led to the opening of another port in the Malay Peninsula and therefore, further enhanced the importance of peppers, nutmegs, cloves, *gambir* and cassava by Chinese and European growers. That scenario had further strengthened the role of agricultural activity in the Malay Peninsula but not the level of its urbanization.

Malaysia was once had tin ore reserves and was also the largest tin ore producer in the world³⁾. The main area was located in Kinta Valley, which was situated in the middle of the state of Perak. At the beginning, tin mining activity was undertaken by local people on a small scale without affecting the social, economic and environmental conditions of the local

area. However, the inclusion and admission of large scale of modern technology into Malaysia had contributed to a socially, economically and environmentally friendly impact. One of the huge impacts that remain until today is the development of the cities which are resulted from the mining activity.

IV. Tin mining

The tin mining activity in 1800s was initiated by the Malays where Long Jaafar acted as a pioneer in Taiping, Perak in 1848⁴). After that, he encouraged Chinese miners to venture into small scale of the mining activities. The Malays and the Siamese played roles as the early miners in the small scale mining activity and the mines were known as Siamese Mines by the locals⁵). The unfocused technology acted as the problem of making it difficult to dig in deeper and the difficulties in controlling the water flooding into the mines had turned the mining activities among the Malays unprofitable. The mining method which was known as *lampan* could not help the mining industry to grow⁶). Similarly, during that time, the Malay community was practicing subsistence farming, especially along rivers that could provide suitable environment for farming. Consequently, the settlement was still in the form of a village along the river and did not show the concentration of the population to a centralized settlement which could act as the basis for the establishment of the cities⁷).

The ore mining by Chinese miners in Malaya also did not grow even when they tried to adapt the *lampan* technique by introducing the new

method called 'chain pump'. A more effective ore mining that changed Malayan economy structure from the agriculture-based economy to the tin mining began in 1877 when British Resident during that time, Sir Hugh Low brought in a steam engine and a centrifugal pump which were then attached to a Chinese mine in Taiping, Perak⁸). That method brought a huge profit to the miners. Hence, Taiping had turned as a centre of mining for the state of Perak in particular and for Malaya in general. In 1912, British miners introduced a dredge to the area around Kinta. In addition, the start of the mining activity had also opened two ports, namely Anson Bay (which is now known as Teluk Intan) and Port Weld. Furthermore, it helped Taiping to be formed (Table 1).

Table 1 Main city, town and village in Perak: 1891 and 1901

City/Town/Village	Total Population 1891#	Population 1901*
Taiping	13,304	13,331
Telok Anson	3,373	3,134
Ipoh	3,184	12,791
Gopeng	2,870	3,157
Kamunting	2,608	a
Lahat	2,232	2,530
Batu Gajah	2,135	3,261
Tapah	1,630	2,244
Matang	1,289	a
Papan	1,218	2,441
Kuala Kangsar	952	1,157
Parit Buntar	881	a
Pasir Hitam	650	a
Kuala Selama	278	a
Port Weld	266	a

Source: Lim Heng Kow (1978) *The Evolution of the Urban System in Malaya*, Penerbit Universiti Malaya, p. 43.

#Perak Government Gazette, 1891

*Federated Malay States Census of Population, 1901

a=total population less than 1,000

As mining activity grew successfully and formed the economy, Malaya encouraged the entry of Chinese workers into Malaya in order to form business activities using money by Chinese traders to meet the needs of the mine workers⁹⁾. The start of the business activity had led to the emergence of the role of middlemen and consequently, it further boosting business activities with the influx of continual goods to the business areas. The expansion of money utilization helped to flourish the business activities. The opening of more tin mines had encouraged the entrance of large-scale mining workers from China and subsequently increased the business activities in mining areas. The business centre in the mining area turned the area to be more important and attracted more migrants to the location. Furthermore, the small towns continued to form big cities which also served as a tin mining centre of Taiping, Ipoh, Kuala Lumpur and Seremban. The need of import and export facilities in the mining industry formed a few ports such as Port Weld, Telok Anson, Klang and Linggi¹⁰⁾. The early development of the mining industry had turned the state of Perak, Selangor, Negeri Sembilan and Pahang as the leading producer of tin ore in Malaya.

However, the interests of the mining centres tend to become 'mobile' where at the beginning; the focus centres were in the state of Perak, where Larut and Taiping districts were the main mining centres. The small ore reserves in Larut had resulted the mining activity to decline and, as a result, mining activities begin to move to Southern towards Kinta area. Kinta area had a larger ore reserves and it led

to the concentration of mining activities in Kinta Valley until the recession of the world economy happened in the mid-1980s. That phenomenon caused the ore mining to be less profitable due to the low prices, high mining costs and ore reserves started to decrease and most were found in an unexplorable areas¹¹⁾. The mining activity has declined until these present days and time. Although the price of ore in the world market continued to fluctuate but it still could not attract the miners or investors to open ore mines. The awareness movement on the destruction of the environment in the country has also been a cause for the disinclined interest in mining activity. The mentioned scenario was the negative impact of ore mining on earth and the reason for socio-economic damage among the community of mining areas¹²⁾.

During the intensive and rapid mining activities in Kinta Valley, Ipoh became the hub of the activity. Several towns around Ipoh like Batu Gajah, Papan, Gopeng, Kampar, Sungai Siput and Kuala Kangsar began to develop. That scenario had flourished Kinta Valley and its location in the middle of Perak had turned Ipoh as the state economic centre and next, became the capital of the state. In the early days of ore mining in Kinta Valley, Batu Gajah town had been tried to be transformed into a central administrative centre that moved from Taiping, and similar to Taiping, Batu Gajah also went through the same experience, where it was overshadowed by the strategic importance of Ipoh, which was situated in the middle of Perak.

The same scenario occurred in the state of Selangor which was also rich in tin ore reserves in Klang Valley. Kuala Lumpur was said to

develop and be the centre for mining industry of Selangor. Since it is located in the middle of Selangor and also in the middle of the Malay Peninsula, hence it became the capital of the Federated Malay States over other areas in the state of Selangor from the year of 1896. The importance and roles of Kinta Valley were taken over by Kuala Lumpur and its surrounding areas¹³. Likewise, Negeri Sembilan, which was also rich in tin ore based in Seremban area, could not quell with Kuala Lumpur's strengths and interests. Pahang, a state that also held in tin ore reserves started to be exploited but it was not great enough to overcome the interests of Perak and Selangor.

Growth and importance of the town (2,000 and above population) and city (10,000 and above population) that involved with mining industry can be seen in the Malaysia population census data. The population of towns and cities that involved in mining has continued to grow rapidly until mining interests begin to decline. In these present days and time, there are towns and cities of mining which are no longer important to the states that are involved with mining unless it becomes the town or city centre of the county. The towns and cities are now live by no longer depending on mining activities but on other activities such as business, services, administration, tourism, manufacturing and agriculture.

V. Other factors that contributed to the urbanization before independence

Fell¹⁴, Saw¹⁵) and Sulaiman Mahbob¹⁶) have concluded that the single largest factor contrib-

uting to the urban development has been the "Emergency" (1948–1960), which caused many families in rural areas to leave their homes—voluntarily or by decree—and seek the security of towns and villages¹⁷). A municipal element that helped town or city which involved with mining activities to flourish was the resettlement policy of the population during "Emergency" where the Chinese, Malays and Indians from rural areas were transferred to "New Village" areas which were located along the main roads and near with the existing town and city¹⁸). The goal was to eliminate the threat of communism against the people and the state. The construction of the new Chinese-populated villages was initiated in 1948 and during that time, the communist opposition to Malaya was culminating. A total of 480 new villages had been established in Peninsular Malaysia which accommodated 572,917 people. This Emergency settlement can be seen in the population census starting from 1957/60 (Table 2 & 3). Those new villages had further increased the number of towns, cities and the population near the settlements. The nature of the Chinese people who prefer to trade has made the new settlements formed the centres of service that eventually developed into towns and cities. The towns and cities would either merge with other towns and cities, or they could continue to develop on their own. For example, in Perak, the new town of Kopisan and Lawan Kuda were initially a small town but later, those two towns joined the city of Gopeng and the new town of Bemban merged with the city of Batu Gajah. The new town of Simpang Pulai, the new town of Kampong Simee and the

Table 2 City, town and village with over 2,000 people in Perak: 1911–1957

City/Town/Village	1911	1921	1931	1947	1957
Ipoh	23,978	36,860	53,183	80,894	125,770
Taiping	19,556	21,111	30,070	41,361	48,206
Telok Anson	6,927	10,859	14,671	23,055	37,042
Kampar	11,604	12,325	15,302	17,499	24,602
Sungei Siput	2,045	2,512	3,215	5,967	15,337
Kuala Kangsar	2,214	3,369	6,030	8,350	15,302
Batu Gajah	3,815	5,093	6,759	7,500	10,143
Tapah	2,326	2,930	3,975	4,900	9,600
Bagan Serai	2,134	2,848	2,995	4,945	5,392
Kuala Kurau	1,509	1,645	—	2,815	5,282
Gopeng	4,957	3,624	3,423	3,717	4,324
Parit Buntar	2,371	2,443	2,929	3,475	4,022
Chemor	1,410	2,582	2,206	2,741	3,707
Chenderiang	3,061	2,593	2,628	1,103	3,690
Tanjong Rambutan	1,040	2,689	2,429	5,453	3,019
Temoh	3,382	2,860	3,319	1,523	2,795
Tronoh	2,018	3,238	3,391	3,024	2,461
Mengelembu	3,999	6,131	8,078	9,751	—
Kamunting	1,059	942	1,028	1,723	2,962
Lahat	1,416	2,997	2,053	1,438	1,535
Papan	2,389	1,285	1,153	—	1,964
Tanjong Malim	—	2,113	3,163	3,527	7,003
Pusing	—	2,118	3,012	2,501	6,963
Bidor Town	—	1,085	1,730	2,331	8,194
Malim Mawar	—	—	—	2,408	5,714
Port Weld	—	—	1,572	2,351	2,260
Klian Intan	—	—	2,618	1,694	—
Selama	—	—	—	1,269	3,355
Lumut	—	—	—	2,525	2,953
Pasir Pinji	—	—	—	4,256	13,945
Mambang Di Awan*	—	—	—	—	6,190
Bukit Merah	—	—	—	—	6,083
Kampung Simee*	—	—	—	—	5,966
Lawan Kuda Baru*	—	—	—	—	3,873
Slim River	—	—	—	—	3,738
Pokok Asam	—	—	—	—	8,022
Guntong	—	—	—	—	15,093
Lenggong	—	—	—	—	4,074
Kampung Bercham	—	—	—	—	4,349
Kampung Tawas*	—	—	—	—	2,628
Simpang Pulai*	—	—	—	—	2,485
Ampang Baru*	—	—	—	—	2,342
Kopisan*	—	—	—	—	2,244
Ampang Baru*	—	—	—	—	2,342
Bemban*	—	—	—	—	2,068
Langkap*	—	—	—	—	2,970
Khantan Baru*	—	—	—	—	3,150
Sungkai	—	—	—	—	2,399
Tanjong Tualang	—	—	—	—	2,370

Source: Lim Heng Kow (1978) *The Evolution of the Urban System in Malaya*, Penerbit Universiti Malaya, pp. 68–69.

* Emergency settlements

Table 3 City, town and village with over 2,000 people in Selangor: 1911–1957

City/Town/Village	1911	1921	1931	1947	1957
Kuala Lumpur	46,718	80,424	111,418	175,961	316,230
Klang	7,657	11,655	20,913	35,506	75,649
Ampang	2,705	4,459	2,272	5,948	9,741
Kajang	2,722	3,316	3,619	7,543	9,630
Kuala Kubu	4,238	4,658	5,333	2,794	6,651
Rawang	1,954	2,350	2,881	3,106	4,686
Serendah	3,466	2,167	2,824	1,544	2,124
Sungei Besi	2,888	4,479	4,976	—	—
Kuala Selangor	—	997	1,387	1,483	2,294
Kepong	—	—	1,831	1,751	2,910
Ulu Bernam	—	—	—	1,147	3,164
Petaling Jaya	—	—	—	1,584	16,575
Sungei Buloh	—	—	—	—	2,423
Jinjang	—	—	—	—	16,685
Sungei Way	—	—	—	—	3,659
Salak Selatan	—	—	—	—	5,596
Subang	—	—	—	—	2,106
Klang Road	—	—	—	—	3,545
Kalumpang	—	—	—	—	3,359
Tanjong Sepat	—	—	—	—	5,051
Ulu Klang*	—	—	—	—	1,437
Rawang*	—	—	—	—	1,671
Rasa*	—	—	—	—	2,239
Batang Kali*	—	—	—	—	1,151
Ulu Yam Baharu-Kg. Gurney*	—	—	—	—	2,460

Source: Lim Heng Kow (1978) *The Evolution of the Urban System in Malaya*, Penerbit Universiti Malaya, pp. 68–69.

* Emergency settlements

new village of Tawas were initially just a group of small towns around Ipoh but when Ipoh became a city, these towns were absorbed and became part of Ipoh (Table 2). The same situation occurred in Selangor where there were also new villages for Emergency settlements such as the new village of Rawang, the new village of Rasa, the new village of Batang Kali, the new village of Ulu Klang and many other settlements that contributed to the increasing number of towns and cities in Selangor.

Besides, the incident on “13th of May 1969” has alerted the government to restructure soci-

ety and eradicate poverty through the New Economic Policy (NEP) which began in 1970. The NEP succeeded in forming several new towns and cities in several parts of the country. The examples of towns and cities that have been developed from the policy are Muadzam Shah and Tun Razak in Pahang. The city acts as the centre of a regional development area formed in several states with the aim to narrow the gap between suburban areas with urban areas as well as acting as the driving force for the remote areas.

Another urban phenomenon that happens in

this country is the development of major cities that takes place in several states. It was initiated by Kuala Lumpur itself which turned its status into a country's largest city. That was the culmination of the history of its establishment from a tiny village into a mining town and next as a colonial capital of British Malaya and now, it is known as the capital of Malaysia and a global city. The other examples of upgraded cities are Ipoh, Petaling Jaya, Shah Alam, Malacca, Kuantan, Johor Bharu, Alor Star, Kuala Terengganu and Kota Bharu.

The rapid transformation of Klang Valley which started from the tin mining industry has expanded into manufacturing industries until it brought the formation of Petaling Jaya, which is now known as the satellite city to Kuala Lumpur. The rapid development of the manufacturing industry has declared Petaling Jaya as one of the cities in Klang Valley. The declaration of Kuala Lumpur as a Federal Territory has forced Selangor to build a new administrative city and a new state capital, Shah Alam. Shah Alam, which was also based on the manufacturing economy, has grown rapidly and has now been given a status of the city. Hence, Klang Valley has three merged cities and hence, making it as the first megalopolis in the country. All of these cities were initially the result of the development in tin mining industry.

VI. Mining activities and urbanization in Kinta Valley and Klang Valley

1. Kinta Valley

Although Kinta Valley and its surrounding areas expanded early in its mining industry, it

did not reveal the rapid development as what was being experienced by Klang Valley. Ipoh, which was located in the centre of Kinta Valley, did not grow as rapidly as Kuala Lumpur and its surrounding areas. Mining towns located around Ipoh like Batu Gajah, Gopeng, Kampar, Sungai Siput, Cemor and Tanjung Rambutan failed to expand and to match with Petaling Jaya and Shah Alam. The manufacturing industry in Kinta Valley did not grow rapidly as in Klang Valley. That was likely due to the decline in the tin mining industry in Kinta Valley where could not be replaced by large-scale manufacturing industries such as in Klang Valley. The function of Port Klang, which controlled the movement of in and out for Klang Valley, was absent in Kinta Valley. Port Weld, which was opened early in the development of the tin mining industry, did not grow well, even diminished by the shifting of tin mining activities from Taiping to Kinta area. Hence the port attraction factor for the development of Kinta Valley was nothing compared to Kuala Lumpur. The Anson Bay Port (Teluk Intan) also did not play roles as Port Klang. Those two harbours only served as fish landing ports for nearby fishermen.

Taiping had been the main settlement centre in 1891 with a population of 13,304 people and there was no other settlement centre which was comparable to Taiping (Table 1). The second major centre was Telok Anson which served as a port and mining area in Batang Padang. The third largest settlement centre was Ipoh with a population of 3,184. Since mining activity had moved to the Kinta area so rapidly due to the huge reserve in Kinta Valley, therefore it made Ipoh as the second largest

settlement centre after Taiping with a population of 12,791 people, which was very close to the Taiping population of 13,331 people. Other settlement centres did not show rapid population growth and that indicated less developed mining activities occurred around the centres.

In 1891, Taiping was the only town that had a population of more than 10,000 people. Besides, there were six other settlements that could be assumed as a town with a population of more than 2,000 but less than 10,000 people. However, there were also a few settlements with a population of more than 1,000 but less than 2,000 people could be considered as a town because all residents lived in groups in a certain area and during that time, the municipal element of the country was still new. Therefore, the settlements in that category could also be said as a town. There were also five settlements with a population of less than 1,000 people and those settlements could be regarded as the base for the formation of a town. There were several settlements which were situated close to Taiping such as Kamunting, Matang, Kuala Selama and Port Weld, and those settlements were located in the same area that were also involved with the tin mining industry. Although Ipoh did not grow rapidly during that time, but there were many neighbourhoods around it such as Gopeng, Lahat, Batu Gajah and Papan which began to involve in tin mining industry. Port Weld became the main port for the mining areas in Taping and Telok Anson acted as the port for mining areas in Kinta Valley.

The 1901 census has shown the weaknesses in Taiping area compared to Ipoh. In 1901, the

population of Taiping only increased by 27 people compared to 13,304 people in 1891. However, Ipoh's population tripled to 12,791 in 1901 compared to 3,184 in 1891 (Table 1). In addition, mining settlement centres such as Kemunting and Matang which were located near Taiping had reduced in the number of its population. Settlement centres such as Kuala Selama and Port Weld did not show population growth beyond the 1,000 population. Compared to the surrounding neighbourhoods of Ipoh such as Gopeng, Lahat, Papan and Batu Gajah, they were all experiencing a population increase. Telok Anson showed a reduction in its population of 239 people but it did not experience deterioration as what had happened to Port Weld. However, Tapah, which was located near Telok Anson, showed an increase in the population of 614 people. It indicated that the mining industry did not grow in Tapah area. Therefore, Telok Anson, a place that was experiencing a reduction in its population acted and served as a port for exporting ore and bringing in essential goods into Tapah, Ipoh and its surrounding areas.

The population census data from 1911 to 1957 (Table 2) shows the varied population changes within the town/city that involved with mining activities in Perak. It showed the importance of tin ore mining as a growing centre of cities. Taiping, which became the main mining town in Perak in 1891, showed a deterioration of its interest and its place was taken over by Ipoh where in 1911, the number of Ipoh residents (23,978) overtook Taiping population (19,556) of 4,422 people. Next, the Ipoh population grew rapidly due to the vast mining area

in Kinta Valley. Ipoh residents in 1921 achieved a number of 36,860 people. The number increased by 12,882 compared to Taiping which increased by only 1,555 people. The population of Ipoh continued to grow rapidly between 1921 and 1931 with an increase of 16,323 people, from 1931 to 1947 with a larger increase of 27,711 people and from 1947 to 1957 with an increase of 44,876 people. The total increase from 1947 to 1957 was almost equal to Taiping population in 1957, which were 48,206. That implied the greater importance of Ipoh compared to Taiping.

Taiping was a city that grew slowly. From 1921 to 1931, Taiping population grew by 8,959 people, from 1931 to 1947, the population experienced an increase of 11,291 people and from 1947 to 1957, there was only an increase of 6,845 people. The towns near Taiping also did not show high population as compared to the mining towns around Ipoh. Kemunting in 1891 had a population of 2,608 and the number continued to decline to 942 in 1921 and subsequently increased slightly but did not exceed the number of population in 1891. Pekan Selama showed that its population increased from 1,269 people in 1947 to 3,355 people in 1957. However, the towns which were situated near Ipoh showed a large population growth in line with the development of mining activities around the settlements. For example, cities like Batu Gajah, Gopeng, and Kampar had grown rapidly.

The increasing population growth in the mining towns was due to the large influx of Chinese workers from the 1880s to the 1920s. By the end of the 1920s, the world economic downturn

took place until the early 1930s and during that time, the influx of Chinese workers began to decline¹⁹⁾. The widespread of unemployment effects in the Malay Peninsula resulted in enforcing the control of the migrants to the Peninsular by the British rulers. The Immigration Control Ordinance was enforced which prevented direct migration to the Federated States of Perak, Selangor, Negeri Sembilan and Pahang. The male labor entry quota to the Straits Settlements, Penang, Melaka and Singapore, was strictly enforced and only female migrants who were largely made up of Chinese were allowed. Therefore, the development of mining towns after the economic recession was much more than just internal movement of mine workers from a less developed area to a developed mining area. The number of Chinese population increased with the influx of women workers and it also helped to increase the ethnic population through natural increase compared to the international migration. The population of Chinese rose from 1,285,000 in 1931 to 2,334,000 in 1957²⁰⁾.

The development of mining industry in the late 1880s began simultaneously in Larut and moved to Kinta, in Klang Valley centred in the Kuala Lumpur and also in Sungai Ujung, Negeri Sembilan. In 1872, Larut produced a total of 1700 tons of tin, while Kuala Lumpur 2000 tons, Sungai Ujung 1000 tons and Kinta 1000 tons²¹⁾. The stated production continued for almost every year. Mining in Larut began to decline by 1896 and the capital had flowed to Kinta. That had made Kinta and Kuala Lumpur appeared as the two main mining centres in

Malaya. It was said that the quality of tin ore in Pahang and Negeri Sembilan was low and the difficulty of capital rising had made these two states to fall far behind in the tin mining industry.

In addition to tin development, the rubber plantation industry also grew rapidly since 1910 in the Federated Malay States such as Perak, Selangor, Negeri Sembilan, Pahang and the Unfederated Malay States such as Johor, Kedah, Kelantan and Terengganu. The increase in the Federated Malay States was very rapidly from just 2,207 acres in 1910 to 1,534,964 acres in 1930. The rubber industry also affected the growth of cities in the peninsula.

2. Klang Valley

The tin mining activity in Klang Valley was almost the same as the start of mining in Taiping Perak²²). In 1824, there were seven areas or tin mining villages in Klang Valley and one of them was Kuala Lumpur or known as Sungai Lumpur²³). Kuala Lumpur became a successful mining settlement after mining activity succeeded in the area nearby Ampang since 1857²⁴). Ampang has become part of Kuala Lumpur today. There were also areas located around Kuala Lumpur which had tin mining areas such as Pudu, Petaling, Ulu Klang, Batu, Setapak, Kepong, Kuala Kubu, Serendah²⁵). As Kuala Lumpur was located at the confluence of Sungai Gombak and Sungai Klang, hence those two river catchment areas made it easier and quicker for Kuala Lumpur to become a trade centre at that time. All locations which were situated around Kuala Lumpur have direct road that links to Kuala Lumpur.

There were other areas which also assisted

the development of Kuala Lumpur such as the mining areas of Damansara, Cheras, Kajang, Rawang, Sungei Besi and Bamatan which could all be linked to Kuala Lumpur. Kuala Lumpur became more prominent when the British Authority moved its administrative centre to Kuala Lumpur from Klang in 1880. In 1896, Kuala Lumpur became the capital of the Allied States consisted of Selangor, Perak, Negeri Sembilan and Pahang²⁶). With its new status, Kuala Lumpur became a focus on all forms of spatial and economic development and thus, it could build faster. The population in Kuala Lumpur grew from 2,000 in 1878 to 3,000 in 1880, and subsequently increased to 4,054 in 1884 and further increased to 25,000 in 1895. In 1911, the population in Kuala Lumpur was 46,718 people, which was much higher than Klang, of which with only 7,657 people (Table 3).

“Besides Kuala Lumpur, there are five (of eight cities in Malaysia) located in Klang Valley and they are Klang, Petaling Jaya, Ampang Jaya and Subang Jaya. There are also some large cities with population exceeding 100,000 people in the Klang-Langat Valley, namely Selayang, Shah Alam, Kajang and Batu 9, Cheras. This indicates that urbanization process is rapidly concentrated around developed areas of the Klang-Langat Valley”³¹).

If compared to the number of residents between Kuala Lumpur with Ipoh, the population in Kuala Lumpur was almost double the number of residents in Ipoh in 1911 (Table 2 & 3). However, there were no other towns in Klang Valley that were larger than Kinta Valley. That contradicted with the towns in Kinta

Valley and its surrounding areas where Taiping became the second city after Ipoh with a total population of 19,556 people and its third city was Kampar with 11,604 people and the fourth city was Telok Anson with a total of 6,927 people. However, the second city in Klang Valley after Kuala Lumpur was Klang which had a population of 7,657 people and it was smaller than Telok Anson town, the fourth city in Perak. In Klang Valley, there was no other big city except the third largest city of Kuala Kubu with a population of 4,238 people and the fourth largest city was Serendah with a total population of 3,466 people and other cities with a population of 3,000 and below. This shows that the area in Klang Valley was too focused on Kuala Lumpur since the beginning. Although Kinta Valley had more population, but it did not only focus on Ipoh as it was scattered to several towns nearby. However, the populations of Kinta Valley did not grow rapidly as it did in Klang Valley. Therefore, the towns in Klang Valley could expand easily over the towns of Kinta Valley.

VII. The present urban condition in Kinta Valley and Klang Valley

The rapid effects of the progress in Klang Valley and Kinta Valley had eliminated the physical effects of the tin mining history in both areas except on the small areas of Kinta Valley which was somewhat less developed than the Klang Valley. Klang Valley formed an extensive urban region covered by three major cities namely Kuala Lumpur, Petaling Jaya, Shah Alam and several other towns such as Klang, Port

Klang, Kepong, Puchong, Serdang, Kajang, Bangi, Putrajaya and Cyberjaya (Table 4). The rapid regional and urban development required extensive areas for municipal, housing, industrial and infrastructure projects where all former tin mining mills had been modified according to the current needs. For instance, Sunway Lagoon Theme Park area has been built on the vast and deep mining lake area.

The rapid regional and urban development as in Klang Valley did not occur in Kinta Valley. The urbanization process in Kinta Valley was slower and only Ipoh has grown into a city. The important ancient mining towns located around the city of Ipoh did not grow rapidly as what have been experienced by Petaling Jaya and Shah Alam. Bandar Batu Gajah, Gopeng, Kampar, Sungai Siput, Kuala Kangsar and Chemor did not merge and join as those in Klang Valley but remain as “stand-alone” or individual towns with their respective identities. In the less developed areas around the towns, there is still a history of relics of the tin mining industry such as the remains mining lakes and small hills due to the dumping of landfills from mining mounds in the past. This scenario is due to the absence of extensive land use change in these areas. Even though there is a recent development on the mining sites in Gopeng area for manufacturing and trading industries, but it is not widespread.

Taiping, which once marked as the earliest tin mining site developed, is now just a historical town. Taiping has not grown successfully like Petaling Jaya or Shah Alam. Port Weld, which was the main mining port in the Northern Peninsula area, currently serves as a

Table 4 Cities in Selangor and Federal Territories of Kuala Lumpur: 1957–2000

City	1957	1970	1980	1991	2000
Kuala Lumpur	—	—	—	489,823	1,254,685
Salak Selatan	5,596	9,571	—	9,523	10,333
Sungai Besi	1,796	3,483	—	8,526	8,970
Selayang	—	—	—	389,262	426,951
Batu Arang	5,391	—	3,935	5,671	7,670
Gombak Setia/Tmn. Perwira	1,202	1,811	2,057	15,505	23,468
Kg. Baru Rawang	—	—	—	3,227	2,928
Kuang	1,854	—	1,459	2,109	2,627
Rawang	4,688	—	—	19,086	31,200
Selayang Baru	—	—	—	124,228	164,812
Ampang/Ulu Kelang	—	—	—	90,488	126,459
Klang	—	—	196,209	161,773	281,089
Petaling Jaya	—	—	218,331	259,519	438,084
Seri Setia (Sg. Way)	—	9,022	—	11,290	11,449
Sg. Way Subang	—	7,757	—	13,487	13,560
Shah Alam	—	—	—	123,192	319,612
Batu Tiga	—	2,922	1,287	1,169	2,999
Kg. Baru Sg. Buluh	—	2,897	—	6,877	7,572
Pekan Sg. Buluh	—	3,848	—	1,509	1,180
Shah Alam	—	—	24,138	102,019	147,140
Subang/Kg. Baru Subang/Kg. Melayu	—	3,140	4,401	10,668	11,911
Serdang Lama	—	1,055	641	444	246
Seri Kembangan	—	—	—	46,697	66,082
Subang Jaya	—	—	—	—	138,981
M.P Ampang Jaya	—	—	—	46,006	348,794
Ampang	—	—	—	30,067	42,254
Kajang	9,630	—	108,569	96,176	516,720
Balakong	1,237	1,612	1,974	1,928	1,643
Bangi	—	2,040	2,183	3,163	4,879
Kajang & Sg. Chua	5,236	9,224	30,012	46,269	86,072
Sepang	—	—	11,477	13,590	49,064
Cyberjaya	—	—	—	—	1,491
Dengkil	—	2,350	2,258	3,800	6,849
Putrajaya	—	—	—	—	5,268
Salak	1,299	1,118	1,010	789	987
Sepang	—	1,960	1,974	1,994	4,504
Sungai Pelek	2,168	4,665	5,206	4,816	6,445
Telok Datok	—	1,272	2,175	2,711	3,379
Batang Kali	1,151	—	1,065	3,545	3,858
Bukit Beruntung	—	—	—	—	19,322
Kalumpang	—	3,668	3,641	4,132	5,064
Kerling	1,396	2,477	2,944	2,810	2,717
Kg. Ulu Yam Baru	2,460	1,807	2,338	4,023	7,884
Kuala Kubu Baru	—	8,748	10,473	11,972	17,763
Rasa	2,239	5,080	5,269	4,492	7,704
Serendah	2,124	2,741	3,260	3,558	7,568
Ulu Bernam	3,165	3,862	5,213	5,159	6,770
Ulu Sg. Choh	—	1,141	1,351	1,806	3,139
Ulu Yam Lama	1,226	1,405	1,796	1,948	2,400
Tanjong Karang	1,854	2,918	3,236	7,749	8,726

Source: Fell, H. (1960) *Population Census of the Federation of Malaya 1957*, Department of Statistics of Malaysia, Jabatan Perangkaan Malaysia (1977) *Laporan Am Banci Penduduk Malaysia: Banci Penduduk dan Perumahan Malaysia 1970*, Jabatan Perangkaan Malaysia (1982) *Kawasan Pihak Berkuasa Tempatan: Penduduk, Isi Rumah dan tempat Kediaman: Banci Penduduk dan Perumahan Malaysia 1980*, Jabatan Perangkaan Malaysia (1992) *Laporan Kiraan Permulaan Bagi Kawasan Bandar dan Luar Bandar 1990: Banci Penduduk dan Perumahan Malaysia 1990*, Jabatan Perangkaan Malaysia (2001) *Laporan Kiraan Permulaan Bagi Kawasan Bandar dan Luar Bandar 2000: Banci Penduduk dan Perumahan Malaysia 2000*.

small port used by local fishermen to dock.

Similarly, Telok Anson port which was once an important port for tin mining industry in Kinta Valley is now dim and its function is more to act as a small port for local fishermen. However, compared to Port Weld, the port of Telok Anson today is somewhat more fortunate as the number of fishermen who use it is higher. In addition, there are also better equipment and larger boats. For Port Weld, it may be overshadowed by Penang port and Telok Intan also is emasculated by Port Klang. However, Lumut Port, which was initially not involved with the mining and construction industry, was developing slowly but is now rapidly expanding into the major ports of Kinta Valley and the entire of Perak state. In terms of space, Lumut harbour is bigger and equipped with shipyard that can accommodate big ships compared to Telok Anson and Port Weld ports which are very small. This has to do with the current Perak state government policy which focuses and stresses on the Lumut ports which is seen to be more competitive with the rapidly developing and highly-needed environment.

The population distribution between these two mining valleys was also found to be different in terms of distribution and size. The development and population distribution of residents in Kinta Valley has not widely spread and the population based on the 2010 census was 735,601 people, covering major mining towns such as Batu Gajah, Gopeng, Pusing, and Lahat that were located in Kinta district (Table 5). The population growth was relatively low at 1.68% and this percentage was the second highest percentage of growth in the state of Perak

after Central Perak district with the growth of 1.85%. In Kinta area, Kampar has formed a small district where Kampar was the main centre and it was also one of the tin mining centres located not far from Ipoh. The area showed a population of 95,402 people with a population growth of 1.59% for 2000–2010. It shows that the population growth rate was lower than Kinta area. Nevertheless, the growth of Kampar and Kinta district population was higher than the overall growth of the entire Perak state population of 1.35% for 2000–2010. The total population of Perak in 2010 was 2,258,428 people, which indicated a smaller population than the total population of Selangor.

The value of the population concentration index in Peninsular Malaysia are 49.24, 48.85 and 51.57 respectively for 1980, 1991 and 2000²⁸). Population Census 2010 shows that the population of Klang Valley was larger than Kinta Valley. For the Federal Territory of Kuala Lumpur, the population was 1,627,172 with a higher population growth of 2.2% for the years 2000–2010. While, Selangor had a population of 5,411,324 with a population growth rate of 3.17% in between 2000–2010. The Petaling district had a population of 1,782,375 people with a higher growth rate of 4.09% for the years 2000–2010. Petaling Jaya, a centre of Petaling district was the satellite town of Kuala Lumpur at that time. Gombak and Klang districts also had a high population. Gombak district had a population of 682,996 people with a population growth rate of 2.4% for 2000–2010. Klang district had a population of 848,149 with a slightly higher growth rate of 2.76% for the years 2000–2010. The Federal Territory of Putrajaya

Table 5 Cities in Perak: 1957–2000

City	1957	1970	1980	1991	2000
<i>Ipoh</i>	125,770	247,969	300,325	468,841	574,041
<i>Batu Gajah</i>	10,143	10,692	10,781	19,008	34,038
<i>Kampar</i>	24,602	26,951	24,978	23,416	19,795
<i>Taiping</i>	48,206	54,645	149,282	200,324	199,330
<i>Kuala Kangsar</i>	15,302	15,310	14,650	31,806	34,690
<i>Sungai Siput Utara</i>	15,337	21,383	23,912	33,677	34,485
<i>Telok Anson (Teluk Intan)</i>	37,042	44,524	49,771	62,329	60,615
<i>Bidor</i>	8,194	9,934	9,481	18,208	24,247
<i>Tanjong Malim</i>	7,003	7,345	6,427	11,427	14,909
<i>Tapah</i>	9,600	9,139	9,546	13,750	21,295
<i>Lumut</i>	2,953	3,255	2,971	22,234	31,882
<i>Bagan Serai</i>	5,392	8,432	9,402	12,395	16,703
<i>Parit Buntar</i>	—	5,790	6,793	7,475	23,368
Chemor	3,720	3,761	4,070	3,209	2,888
Jelapang	5,168	7,054	8,204	5,959	4,686
Lahat	1,535	1,358	1,466	941	638
Simpang Pulai	2,486	3,507	3,902	4,047	4,286
Tambun	1,010	—	722	414	1,161
Tanjong Rambutan	3,016	5,289	5,550	7,210	7,233
Papan	1,967	1,698	1,098	843	660
Pusing & Gunung Hijau	6,963	9,097	8,959	6,542	4,796
Tg. Tualang	2,367	2,962	2,823	2,022	1,507
Tronoh	2,461	2,128	1,924	1,527	1,991
Gopeng	4,322	4,627	4,668	3,387	3,080
Jeram	—	2,589	3,179	2,204	1,790
Kopisan Baru	2,249	—	4,395	3,295	2,848
Lawan Kuda Baharu	3,875	5,121	6,271	5,219	4,142
Malim Nawar	5,714	7,093	6,433	4,464	3,960
Mambang Di Awan	6,190	8,966	9,772	7,597	6,284
Tronoh Mines	—	—	1,069	704	649
Kuala Sepetang (Port Weld)	2,260	3,233	—	3,783	2,624
Terong	1,463	1,842	1,713	1,308	1,001
Ayer Kuning	1,615	2,107	1,983	1,351	872
Bidor	8,194	9,934	9,481	7,185	4,995
Chenderiang	3,688	3,625	3,256	1,982	1,423
Sungkai	2,399	2,704	2,496	1,738	1,114
Tapah	9,600	9,193	9,546	8,250	7,695
Temoh	2,781	2,558	2,960	1,945	1,505
Tanjong Malim	7,003	7,345	6,427	5,221	4,524
Behrang Stesen	1,692	1,846	1,756	1,559	2,140
Pekan Bantang (Slim River)	3,725	4,729	4,675	3,566	3,040
Padang Rengas	2,170	1,185	1,438	1,168	763
Salak Baharu	1,327	—	2,117	1,733	1,526
Simpang Jalong	2,469	3,852	4,383	3,338	2,663
Sungai Siput Utara	—	—	23,912	21,069	19,945
Langkap	2,974	4,309	4,104	3,478	3,236
Bagan Serai	5,392	8,432	9,402	8,081	8,109
Kuala Kurau	5,282	8,666	8,599	6,922	6,380
Parit Buntar	4,018	5,790	6,793	5,184	4,302
Ayer Tawar	5,900	8,107	8,327	6,712	5,795
Kampong Koh	6,114	8,091	8,232	10,052	13,102
Lumut	2,953	3,255	2,971	1,734	504
Lenggong	4,075	4,527	3,655	3,223	2,695
Grik	3,392	4,860	4,717	4,485	3,384
Kelian Intan	1,899	2,225	2,160	1,585	1,178
Pengkalan Hulu (Keroh)	1,907	3,203	4,484	4,881	4,810
Parit	—	4,038	3,094	2,595	2,014
Seri Iskandar	—	—	—	1,254	4,649

Source: Fell, H. (1960) *Population Census of the Federation of Malaya 1957*, Department of Statistics of Malaysia, Jabatan Perangkaan Malaysia (1977) *Laporan Am Banci Penduduk Malaysia: Banci Penduduk dan Perumahan Malaysia 1970*, Jabatan Perangkaan Malaysia (1982) *Kawasan Pihak Berkuasa Tempatan: Penduduk, Isi Rumah dan tempat Kediaman: Banci Penduduk dan Perumahan Malaysia 1980*, Jabatan Perangkaan Malaysia (1992) *Laporan Kiraan Permulaan Bagi Kawasan Bandar dan Luar Bandar 1990: Banci Penduduk dan Perumahan Malaysia 1990*, Jabatan Perangkaan Malaysia (2001) *Laporan Kiraan Permulaan Bagi Kawasan Bandar dan Luar Bandar 2000: Banci Penduduk dan Perumahan Malaysia 2000*.

had a population of 67,964 people in 2010, with a highest population growth rate of 17.17%. This was because Putrajaya was the newly formed Federal Territory and acted as the Federal Government Administrative Centre of Malaysia since 1999. Based on the number of population, Klang Valley was more powerful in attracting the population to migrate compared to Kinta Valley. The high population growth rate was due to the migration that existed in the area as well as the natural growth rate that was based on high birth rate. The phenomenon shows that the former mining towns in Klang Valley were more sustainable in terms of the role and growth of the population as a city compared to the cities in Kinta Valley (Figures 1, 2, 3, 4 & 5).

VIII. Advantages and competitiveness

There were many advantages that made Klang Valley to appear more attractive to the population, while Kinta Valley was lagging behind although the development for both started within the same time. Historically, the vast ore reserves in Kinta Valley had made the region as the country's and world's main tin ore mining, however, at the same time bringing harms to Kinta Valley itself as the mining industry began to decline. Due to its constant contribution, Perak state continued to depend on mining activities as a major industry for a longer term compared to the contribution of Klang Valley mining industry to Selangor. The importance of tin mining in Klang Valley deteriorated especially at the mining areas around Kuala Lumpur. Hence, the Selangor state gov-

ernment had earlier sought to diversify its economy and shift from the mining industry to manufacturing, business and trade, tourism and other forms of services. Kuala Lumpur was originally set up as the administrative centre of the Federated Malay States and subsequently as the capital of Selangor. Right after the independence of Malaysia in 1957, Kuala Lumpur has served as the capital of the country's administrative centre. All these elements have helped Selangor to diversify its economy and move forward, leaving Kinta Valley lagging behind.

The interest of Kinta Valley began in 1888 when the ore price of 'Straits Tin' in London market rose dramatically which resulting in the tin rush in Kinta Valley until the mining area was increased four times from 13,520 ha and made it as the country's main mining area since then until the recession of the world economy in 1983–84²⁹⁾. The Perak state revenue from mining was still high as in 1982 and the Perak Government received a total of RM33 million from the tin mining tax, but continued to decline to RM6 million in 1983 and further deteriorated to RM3 million³⁰⁾. In addition, the ore output also declined sharply and decreased by 34.8% for 1980–83 due to export controls by the International Tin Agreement Export Controls. Ore prices were decreasing and mining costs were increasing³¹⁾. Although the tin mining industry started to decline but it was not strong enough to convince the Perak state government to look for other options and thus, prioritization was still given to the recovery of the mining industry.

In the Fifth Malaysia Plan 1986–90, the Perak

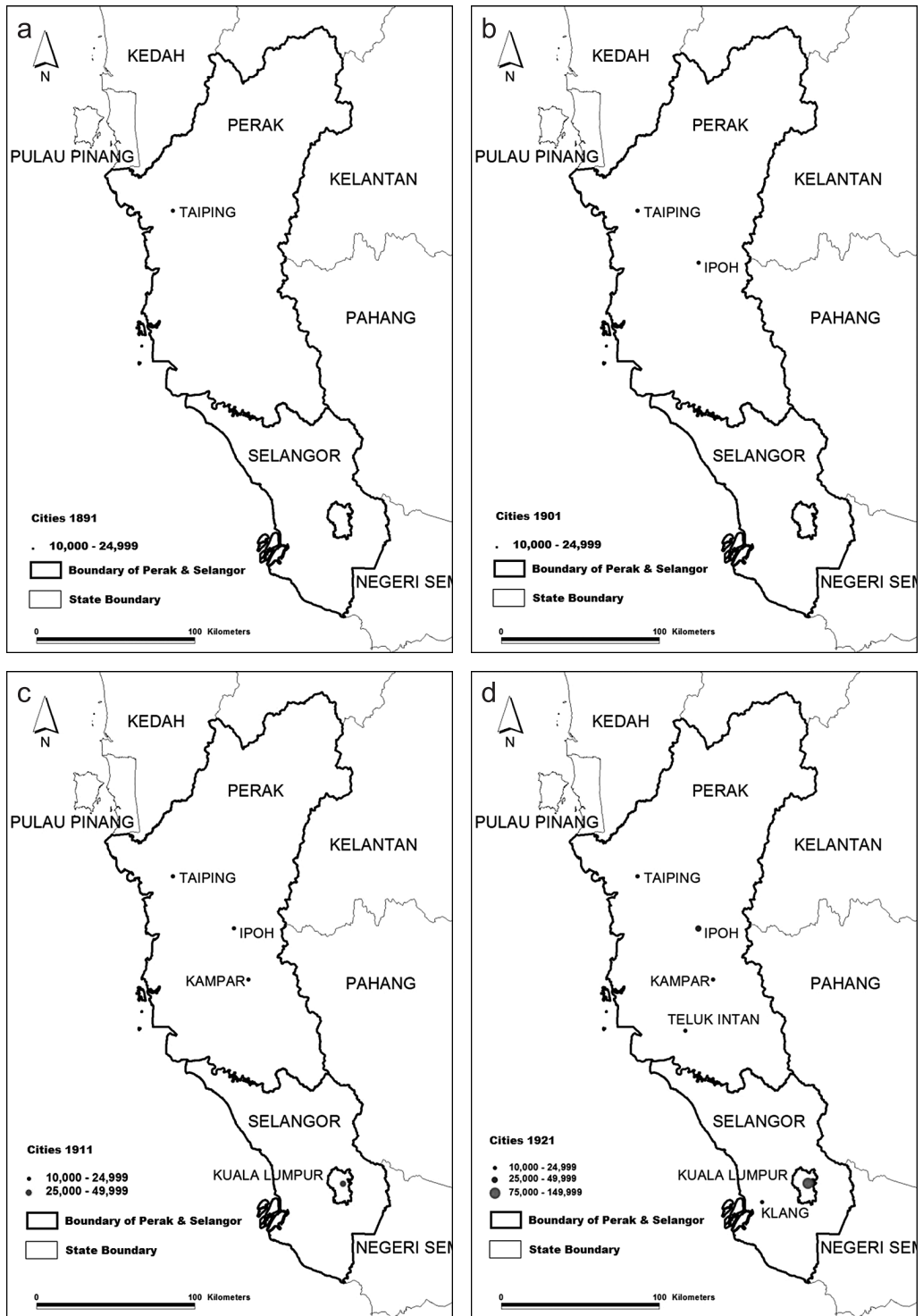


Figure 1 Urban growth in Perak and Selangor: 1891–1921

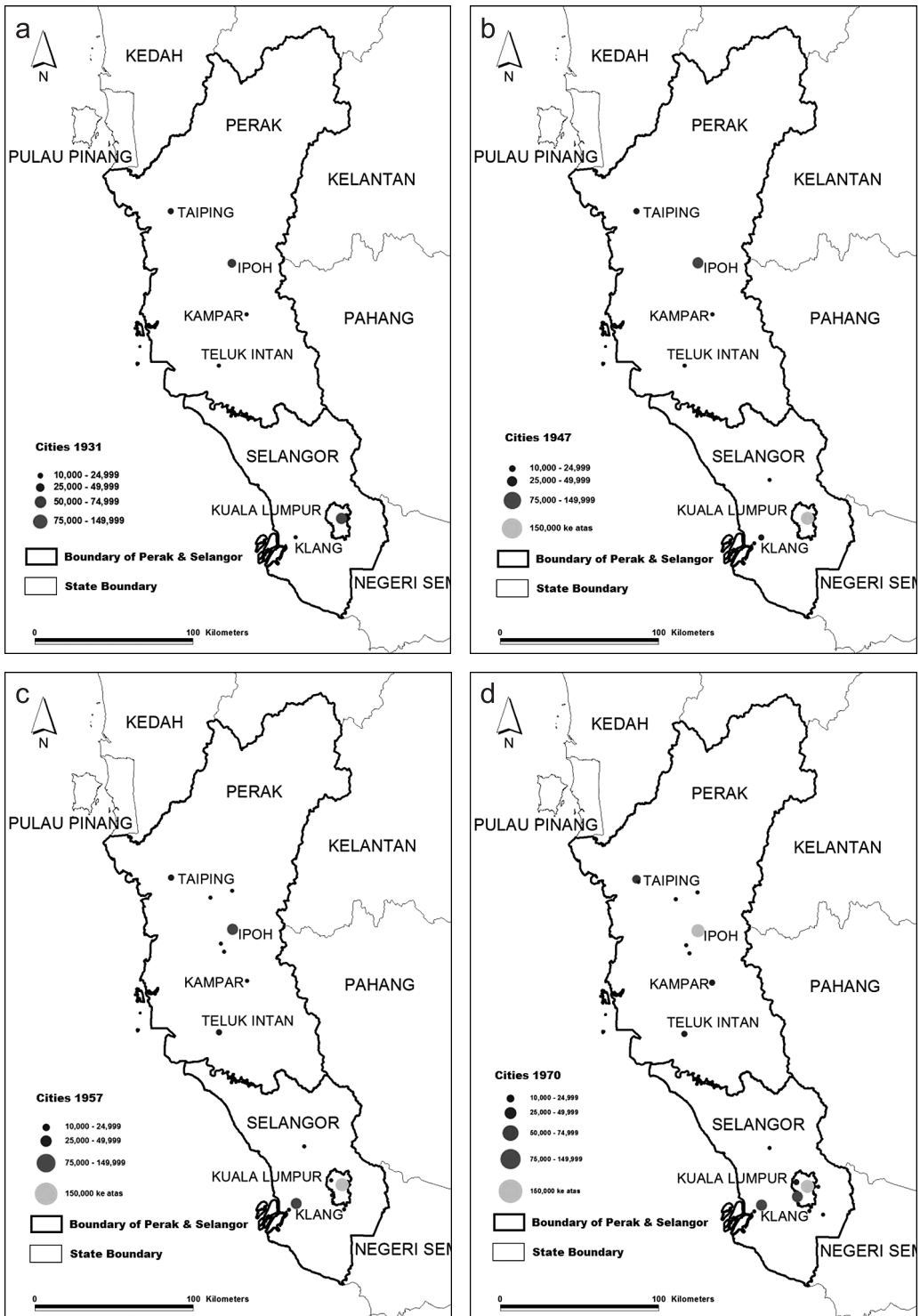


Figure 2 Urban growth in Perak and Selangor: 1931–1970

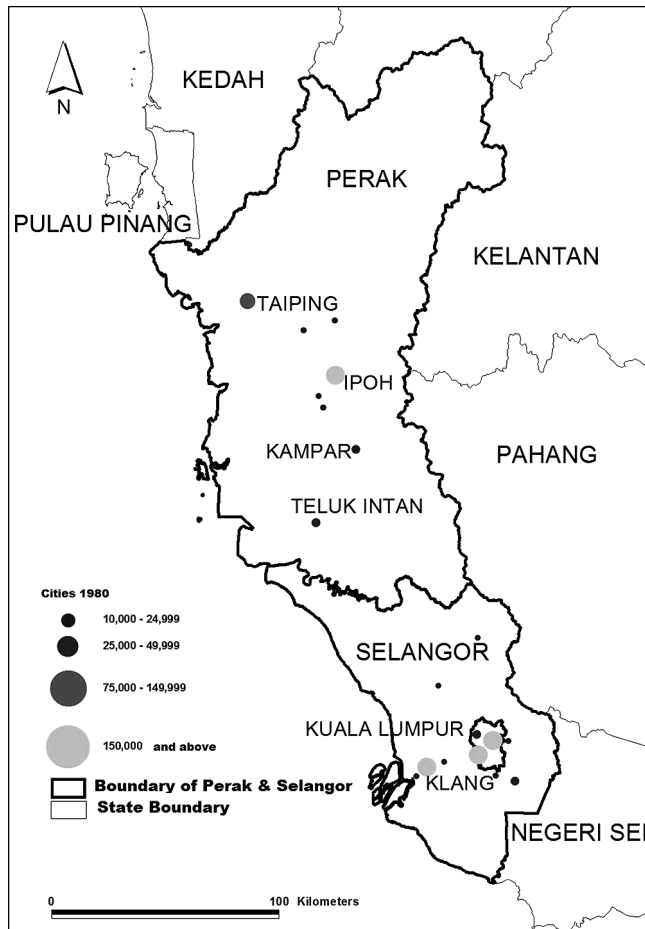


Figure 3 Urban growth in Perak and Selangor: 1980

government laid the foundation for the recovery of the mining industry as a favored policy by outlining 6-step recovery³²). It clearly shows that the Perak governments resolved and put efforts to the recovery of the industry despite the fact that the future of the industry was quite dim and could cause a serious environmental degradation. The Perak government should have followed the Selangor government's move and gave priority to other economic sectors such as manufacturing industries, services and others. The Perak government was strongly

dependent on agriculture where it was the largest sector in terms of employment of almost half of the total number of Perak domestic workers and if mixed with the mining sector, the number would be even greater. Although the services and manufacturing sectors were increasingly being addressed, but that was not strong enough to address the downturn in the mining sector. That was different from the state of Selangor and the Federal Territory of Kuala Lumpur which focused on manufacturing and services sectors such as business and

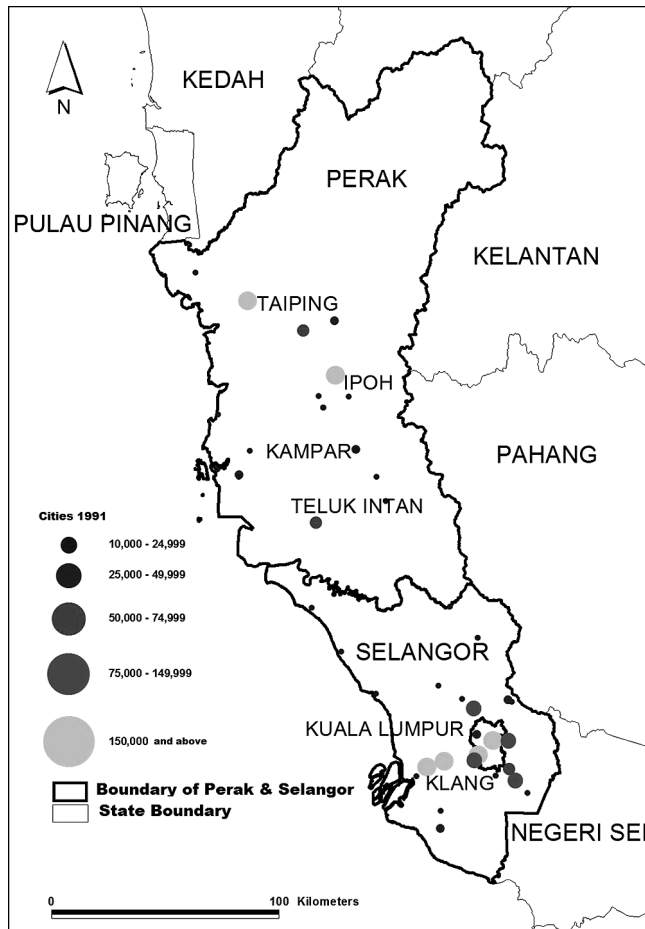


Figure 4 Urban growth in Perak and Selangor: 1991

trade, tourism, education, finance and others.

The overwhelming ore reserves stored in Kinta Valley caused Perak state to rely heavily on Kinta Valley and the tin mining industry as the main economic basis of the state. Unfortunately, the tin mining industry is not an industry that can create other downstream or other ancillary industries that can be developed. Hence, when the depression of the industry took place suddenly, it was difficult for the Perak government to find a way to recover the economy in a short time. Small towns and tin

mining towns located around the city of Ipoh were only focusing on mining activities and there were no other industrial activities that could be developed. When the mining industry declined, mine workers would lose their jobs and because there was no alternative work available nearby, they needed to migrate mainly to Kuala Lumpur and Petaling Jaya which could offer various jobs as in the manufacturing industry. That scenario caused the surrounding areas of Ipoh could not grow rapidly as compared to cities around Kuala Lumpur. Klang

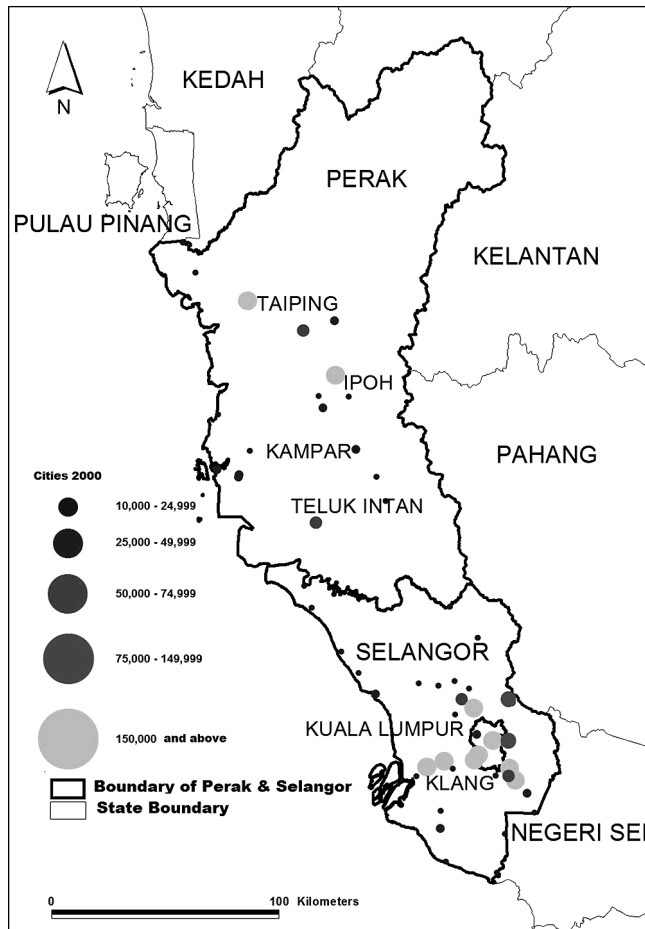


Figure 5 Urban growth in Perak and Selangor: 2000

Valley expanded and has now formed the urban area, but the city of Ipoh remains alone and acts as the main city for the state of Perak. This situation could not help to widen the township of Perak.

IX. Position of Ipoh and Kuala Lumpur in Malaysia municipal ranking

Kuala Lumpur was earlier announced as a City on the 1st of February 1972 and at the same time, it was declared as a Federal

Territory of Kuala Lumpur and serves as the capital of Malaysia. Its status as the state capital was taken over by Shah Alam. Kuala Lumpur goes to a higher status as the capital of its own administrative territories when it was set up as a Federal Territory and became the 14th state in Malaysia. Its development is controlled by cabinets and its daily administration is carried out by Dewan Bandaraya Kuala Lumpur (City Hall of Kuala Lumpur) headed by a mayor.

In the National Physical Plan (2005)³³ Kuala

Lumpur has been identified as a conurbation, which means the largest urban area in the country which includes two cities namely Petaling Jaya and Shah Alam and several other big cities in the state of Selangor which are located around Kuala Lumpur. The boundary of the conurbation extends southward of the country which includes Seremban as part of it (National Physical Plan 2005). It is expected that in 2020 the population of this conurbation will increase to 8.46 million people. Because of the development of the towns of Rawang, Kuala Kubu, Tanjung Malim Selangor and Tanjung Malim Perak, which are now rapidly leading towards the Kuala Lumpur-Selangor-Perak border in line with Selangor and Perak boundary development plans, therefore in 2020, it is likely that the conurbation of Kuala Lumpur will become more widespread compared to what it is today. Consequently, the influence of the Kuala Lumpur City is expected to spread far beyond the Perak state border.

The urbanization that happened to Kuala Lumpur was not experienced by Perak. Ipoh was declared as a city later than Kuala Lumpur which was on May 12, 1988. In the ranking of the Perak state settlement hierarchy, it functions as the State Centre or the state capital of Perak.

Ipoh only serves as the main city for Perak state. At the national level, in the National Physical Plan (2005), the city of Ipoh was a small conurbation with a population of 2020 estimated to be 1.09 million people, smaller than the conurbation of Penang and Johor Bharu respectively. It also symbolizes that the city of Ipoh did not grow as fast as Penang and Johor

Bharu after the mining industry has extinct. Pulau Pinang is now increasingly advanced with its manufacturing industry and its own function as a port town in the northern peninsula. Likewise, Johor Bharu is growing rapidly with its manufacturing industry and its two ports located on the left and right of the city which are also growing rapidly. It is not overshadowed by the rapid development of Singapore, furthermore, it is also included in the area of the Southeast Asian Triangle Growing Area which is expected of a very good future. The Iskandar Regional Development in the southern economic region of the Peninsula also reveals the rapid development of Johor Bharu's future city.

X. Conclusion

Kinta Valley and Klang Valley were once the main tin ore manufacturer for Malaysia and the world. Both were equally competitive and equally contributing to the Malaysia's economy. Due to the ore reserves in Klang Valley which is said to be smaller than Kinta Valley, it is forced to relent and strive to diversify its economy. Kuala Lumpur as the national capital since independence of 1957 to this present day has helped to develop the Klang Valley. Kinta valley was very strong and powerful with its mining industry but did not endeavor to diversify its economy. Finally, when there was a decline in the mining industry, Kinta Valley was unable to revive its economy so fast compared to Selangor and Kuala Lumpur which was far more advanced than Perak. The mining attraction had earlier led to the migration of the people to Kinta Valley but the downturn in the mining

industry had witnessed the migration of people out to Kuala Lumpur and Selangor. Finally, Kuala Lumpur and Klang Valley are now capable of forming a large urban area but Kinta Valley takes quite a while for Ipoh to be declared as a title of City.

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半島マレーシアにおける錫鉱業と鉱業都市の持続可能性

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19世紀半ば以降の英領マラヤ時代、半島部マレーシアにおける錫鉱業は、短期間の間に広大な大地を切り拓き、大きな町を出現させた。錫鉱山の町として出現したタイピンは錫の枯渇によって衰退し、錫鉱業の中心はキンタバレーに移り、イポーがタイピンに代わってペラにおける錫鉱業の中心となった。1970年代以降の錫鉱業の衰退にともない、キンタバレーの多くの町は過度に錫鉱業に依存したため、成長しなかった。これに対して、クランバレーはキンタバレーに比べ、錫の埋蔵量が少なく、キンタバレーよりも早い時期に錫の枯渇に直面したことから、クランバレーの都市や町の産業を製造業やサービス産業に転換する政策がとられた。その結果、クランバレーではクアラランプルやそのほかの都市・町は、成長をとげてきている。

キーワード：錫鉱業、鉱業都市、キンタバレー、クランバレー、半島マレーシア

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