

***Migration and Development:
The Case of Hokkaido and
Malaysia's FELDA Scheme***

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A B S T R A C T ---

The first half of this paper describes the basic characteristics of two-staged migration policies observed in Hokkaido during the Meiji period (1868-1912), and examines the effect of these policies upon changes in the growth of Hokkaido's population. At the same time, these migration policies are analyzed in connection with the overall national and regional development plans formulated during the corresponding period. In the latter half of this paper these Hokkaido experiences are compared with the development of Malaysia's FELDA scheme, and both similarities and dissimilarities between the two migration programs are discussed. Finally, the applicability of Hokkaido's migration policies to the context of the future development of the FELDA scheme is considered.

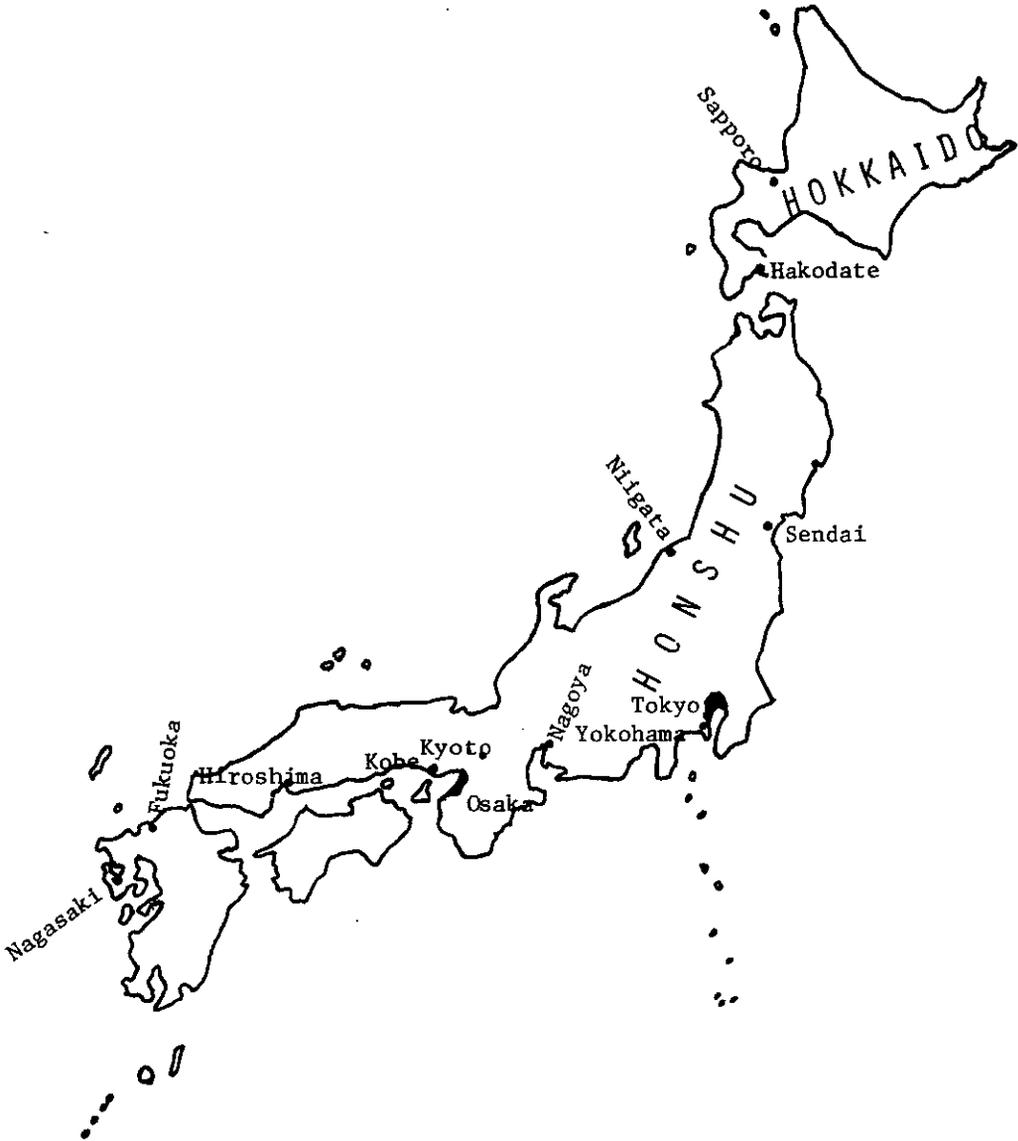
I. Introduction

At present, Asia has a total of approximately 2.6 billion persons or 58 percent of the world population. Slightly more than one quarter of the Asia population is in urban areas while the remaining three quarters are in rural areas. Although the majority of the Asian population is considered rural, there has been a massive transfer of population from rural areas to urban centers, and as a consequence, most of the cities in the region of Asia are now facing numerous side-effects of rapid urbanization. High unemployment, housing shortage and the proliferation of squatter settlements are salient examples of the growing pain of these cities (Robinson, 1975).

Because Asia's pace of urbanization has been faster than elsewhere and is expected to increase in the 1980s, these urban problems will be further aggravated in the years to come, thus posing a serious threat to the balanced growth of each national economy in Asia. To cope with these problems arising from urban crowding, most of the governments in the developing region of Asia are currently pursuing one policy or another to influence internal migration flows (Kuroda, 1981). Although the importance of migration as a useful basis for solving population problems has been increasingly recognized by these governments, there have been only a few successful migratory movements in Asia. The rural resettlement scheme by the Federal Land Development Authority (FELDA) of the Malaysian Government is representative of these successful policies now being administered in Asia.

Another successful case is the migration to Hokkaido, the northernmost island of Japan, which occurred in the early period of Japanese modernization from the end of the Edo Era (1603-1867) through the Meiji Era (1868-1912). At the beginning of the Meiji Era, Hokkaido was a snow-bound frontier with a sparse population of about 200,000 people. In 1981, the island is inhabited by a total of 5.59 million persons with highly-modern productive foundations. This miraculous transformation was due to a series of explicit public decisions to program migration. Although Meiji Japan was substantially different in human resources and natural environment from most of the contemporary developing countries in Asia, the Hokkaido migration experience appears to be extremely relevant to these developing countries as an excellent example of how a government can deal with the migration

Figure 1. Map of Japan



to a frontier as a programmable variable in long-term development planning.^{1/}

In May 1980, an International Seminar on Planned Population Distribution for Development was organized with special emphasis on the pattern of Hokkaido's migration.^{2/} Although this Seminar dealt with various aspects of the Hokkaido experience in migration, the applicability of the Hokkaido case to the context of any specific country was only marginally treated. In view of this limitation, this paper aims at (i) examining two-staged migration policies in migratory flows to Hokkaido during the Meiji period, (ii) analyzing changing patterns of population growth and distribution in Hokkaido as a result of these step-wise migration policies, (iii) clarifying similarities and dissimilarities of the Malaysian FELDA scheme and the Hokkaido experience, and (iv) considering the applicability of the Hokkaido migration policies to the context of the future development of the FELDA scheme.

II. Meiji National Development

Before we discuss the observed relationships between migration and development in Hokkaido, let us briefly describe pronounced characteristics of Meiji economic development. Because the historical development of the Meiji economy has been intensively and extensively analyzed elsewhere (Lockwood, 1954), we will hereby confine ourselves to a summarized description of some aspects of national development which are directly and critically related to Hokkaido's migration and development.

In 1867, upon the fall of the Tokugawa Shogunate, and a brief military confrontation, the new Meiji Government was established in 1868. To guard against opposition at home and potential threats from foreign powers, the new Government attempted to promptly strengthen the economic foundations by mobilizing all available capital and labor for industrialization. The early Meiji economy was still largely a subsistence and partly monetized economy in which a very high proportion of its national income was produced by the agricultural sector. Furthermore, because the Meiji Government preferred not to make large overseas loans for its economic development, for fear of possible colonization by the advanced powers, most of the funds for industrialization thus had to come from the domestic, agricultural sector.

In contrast to an agricultural growth rate of 0.1 percent per annum during the Tokugawa period, the Meiji agricultural development proceeded at an annual average rate of 0.8 to 1.2 percent, thus creating surpluses to be channelled into other sectors for Japan's general economic development (Nakamura, 1965). This rapid agricultural growth can be explained mainly by the increase in the yield per unit of farming area which was brought about by (i) land improvements through better irrigation and drainage facilities, and (ii) the adoption of new agricultural technologies such as superior seeds, effective fertilizers and better methods of crop cultivation. For instance, fertilizer inputs increased by approximately forty times during the period of 1878-1917 (Rosovsky, 1961). The Meiji Government took the initiative to develop locally-suited technologies, and, together with local governments, it established agricultural experimental stations and extension services, and promoted the provision of technical education to farmers (Rosovsky, 1961).^{3/}

The transfer of the fruits of agricultural development to modern sectors was significantly institutionalized by the Land Tax Reform of 1873. The principal purpose of this tax legislation was to establish a unified revenue system in the form of cash payments. This tax scheme provided a strong basis for the Meiji Government in securing a stable of modernization efforts.^{4/} Because farmers paid many levies other than land taxes, the ultimate tax burden on the agricultural sector was extremely heavy. For instance, Rosovsky, (1961) asserts that over the period of 1868-1914 the tax burden in agriculture was always at least twice as large as in the other sectors of the economy.

As a consequence of the relatively heavy tax burden imposed upon the agricultural sector, there was a growing sign of unpaid taxes, land confiscation, increased debts and mortgage foreclosures, which eventually led to the rapid growth of the amount of tenanted land. The tenancy increased from 34.2 percent of the arable land in 1883 to 40 percent in 1892, 44.5 percent in 1903 and 46.2 percent in 1917 (Rosovsky, 1961). These landless tenant farmers constituted a potential group of the labor force who migrated to urban areas and new territories such as Hokkaido.

Prior to the Land Tax Reform, the feudal clans surrendered their land registers in 1869, which was followed by the abolition of fiefs

in 1871. In 1872 the Conscription Law was enacted, which virtually eliminated the need for the existence of the samurai class. Subsequently in 1876, the Meiji Government issued its national bonds to feudal samurai class in exchange for the transfer of their revenues to the new Government. It should be also stressed that the majority of the bonds was granted to previously high-ranking, wealthy ex-samurais.^{5/} Upon the promulgation of the National Bank Act of 1876, these wealthy ex-aristocrats formed many national banks by converting their bonds into capital, thus becoming major financiers of modern Japan. Some of these wealthy financiers became major investors in Hokkaido later. In contrast, the low-ranking petty samurai group had no choice but to seek employment in both urban and rural sectors. Part of these poor ex-samurai people migrated to Hokkaido as pioneers, as will be discussed later.

In 1873, the Meiji Government established the Ministry of Interiors with a view to centralizing its authority for promoting industrialization and strengthening its administrative scheme. The Ministry of Interiors constructed a number of modern silk filatures and opened cotton spinning mills, both of which were fully equipped with imported machinery, largely from France and England. In addition to imported equipment, the advice of foreign technicians was provided to these government-run enterprises under state patronage. Experimental factories were built to produce sugar, beer and other agricultural processed products. Also, many agricultural extensions and experimental stations were built to conduct the feasibility study of various Western seeds and agricultural products. Sheep-raising was also tested on a government-operated ranch.

In concert with these industrialization projects initiated by the Ministry of Interiors, the Ministry of Engineering launched a variety of projects which included the construction of railways, steamer service, shipyards, glass, cement, chemicals, and the mining of copper, coal and precious metals.

To improve its financial position, however, the Government subsequently handed most of these businesses over to private sectors. The majority of sales of factories started around 1884 and ended in 1896. The importance of these sales was that the Government sold its properties to leading merchants at bargain prices and at extraordinarily lenient terms of payment. The Meiji Government thus as-

sisted in establishing a number of the great financial and industrial fortunes of later years (Lockwood, 1954). As active investors, these wealthy businessmen contributed to the industrial development of Hokkaido.

In addition to these sales, the government took another drastic step to put Government finances and currency on a stable basis. With the establishment of the Bank of Japan in 1882, the Meiji Government reorganized the banking system. The Government also reduced its spendings and increased various taxes. These deflationary policies, particularly higher taxes, forced small farmers to deteriorate into tenants. Some of these poverty-stricken peasants migrated to urban areas as well as other parts of Japan including Hokkaido (Hokkaido and Tohoku Development Finance Corporation, 1977). Under the new financial regime, however, Japan accelerated its pace of industrialization.

Rostow (1960) argues that the Japanese take-off occurred between 1880 and 1900 on the basis of railways, coal and other mining products, and cotton manufacture. Among these industries, the rapid increase in demand for coal after the Sino-Japanese War (1894-1895) contributed to the rising importance of Hokkaido's economic status as one of the main coal suppliers.^{6/} In the 1890s the take-off was further stimulated by the rise of military outlays, which subsequently boosted the build-up of heavy industrial sectors such as iron, steel, machinery and equipment.

Because of unprecedented achievements in these diversified industrial sectors, the majority of development economists regard Japanese industrial capitalism as fully framed in the 1900's especially after the Russo-Japanese War (1904-1905).

To summarize, in the early stages of the Meiji economic development the capital allocated for industrialization was generated in the agricultural sector which experienced a relatively rapid growth of productivity through improved farming technologies, such as better fertilizers. The surpluses generated in agriculture were shifted to industrial sectors via two major government measures: the Land Tax Reform of 1873 and the issuance of national bonds to the feudal nobility in 1874. In addition, the agricultural sector sent its surplus labor to modern, industrial sectors, consequently achieving a better allocation of human resources. With such capital and labor si-

honed off from the rural agricultural sector, the Meiji Government powerfully and skillfully guided Japan's prompt industrialization through the proper formulation and implementation of its development policies.

In the above, we have considered the historical development of the Meiji national economy in which both labor and capital utilized for the development of Hokkaido were generated. In the next section, we will specifically look into Hokkaido's component of Meiji economic development and the role of its planned population redistribution in Hokkaido's early development process.

III. Hokkaido Development Patterns and Two-staged Migration Policies

The migration and development of Hokkaido can be analyzed in two parts. The first part will deal with the period from the establishment of the Development Office to the abolition of the Three Prefecture/One Department System. This time period (1869-1886) falls on Rostow's pre-take-off stage of Japanese development (Rostow, 1966). The second part will cover the development of Hokkaido from the beginning of the Hokkaido Agency to the end of the Meiji Era. This period (1886-1912) corresponds to the take-off stage and an early part of the drive-to-maturity stage of Japanese development. In each of these periods, the Meiji Government implemented its development plans specifically designed for Hokkaido. These development plans also included migration schemes.

A. Hokkaido Development Office (1869-1886)

To protect Japan from possible colonization by foreign powers including Russia, the Meiji government formulated a series of policies to strengthen its economic base and consolidate the pre-conditions for the take-off of its economic development. As part of its developmental efforts, the Government's attention was drawn to Hokkaido. In 1869 the Government established the Development Office for purposes of promoting the development of Hokkaido. Although the Development Office initially administered only strategic areas on Hokkaido, it came to control the whole island in 1871.

1. The Development Office Ten Year Plan

In 1870 Kiyotaka Kuroda, Head of the Development Office, recommended that the Meiji Government concentrate on the development of Hokkaido rather than expand its influence over Sakhalin where a sizable population of Russians had already settled. Following this recommendation, the Government embarked upon Hokkaido's "Development Office Ten Year Plan" in 1872. Although the primary objective of this ten-year plan was to develop Hokkaido, it also aimed at defending Hokkaido against potential threats by Russians from the north, and creating employment opportunities for the ex-samurai class. The latter two objectives related to major political issues initially facing the new Government.

The formulation of this plan was heavily influenced by the recommendations of Horace Capron, an American adviser for the Development Office over the period of 1871-75. The total amount initially proposed for this development plan was 10 million yen. The actual expenditure, however, exceeded this planned figure, and amounted to 20.7 million yen. This total expenditure which corresponded to approximately 30 per cent of the average annual government expenditure, in those years was fully funded by the Government.^{7/} The Government also planned to raise development funds of 2.5 million yen through the issuance of Development Office securities. With these financial resources, this plan aimed at (i) building up the basic infrastructure including the construction of a new capital at Sapporo, roads, ports, railroads and schools, and (ii) undertaking industrial development such as the promotion of mixed farming, the mining of coal and minerals, the establishment of government-operated factories, and the growth of international trade.

To increase the economic welfare of Hokkaido's people, the Development Office pursued in its Ten Year Plan both agricultural and industrial development, along with the attempt to build strong local communities. Agricultural development was promoted via the introduction of new seeds, American-styled large-scale farming techniques, and even aspects of the American life style. All of these efforts, however, met only a limited success for various reasons (Enomoto and Kimi, 1969). Although many American agricultural advisers recommended that the rice production would be inappropriate in Hokkaido's climate,

farmers continued attempting to produce rice partly because their dietary patterns could not be changed so easily, and partly because they needed some cash earnings for their livelihood by selling rice-straw products at well-established markets on the mainland or Honshu. After many years of unyielding efforts on the part of farmers, a new hybrid was discovered. Although the rice production started from the southern part of Hokkaido, it gradually moved northward with the help of the Development Office with improved seeds and farming techniques. Hence, rice production is one of the distinguished examples of the interaction between local initiatives and overall development plan in raising the standard of living of islanders on the frontier.

As one of the Ten Year Plan programs, both animal husbandry and livestock-based farming techniques were also initiated by the Development Office on an experimental basis. These experimental efforts produced no immediate success. It took Hokkaido a few decades before these farming techniques were fully utilized and before the dairy industry was able to flourish.

Agricultural development alone can never be the entire development scheme for a frontier place like Hokkaido (Kuroda, 1981). As part of the Ten Year Plan, a total of 39 government-operated factories were constructed over the period from 1871 to 1882: 15 of them producing productive goods and the remainder producing consumption goods. These government-run factories were built for multiple purposes. First of all, they functioned as a market for Hokkaido-grown cash crops and other agricultural produce which farmers grew. Second, they attempted to achieve a self-sufficient supply of fundamental goods required for the maintenance of the islanders' livelihood. In addition to these government-run factories, the Development Office established clearing-houses in various parts of the island for agricultural produce exportable to Honshu and foreign markets.

Furthermore, the Ten Year Plan encouraged the development of coal mining and the railway system. Particularly, the latter was closely linked to the former. Primarily because coal was one of the major exportable products in those days, it needed to be transported to appropriate ports for shipment. At the same time, patterns of the development of the railway system affected geographical patterns of Hokkaido's development itself.

In this fashion, through the implementation of the Ten Year Plan the Development Office was positively and directly involved in facilitating the life of new frontiers. In the Ten Year Plan, however, the administrative costs were approximately 45 percent of the total expenditure, thus leaving a fairly limited amount of resources for developmental projects. Furthermore, as exemplified by huge accumulated deficits of government-run factories, the efficiency and effectiveness of most of the development projects was rather poor.

2. Migration Policies: A Direct Protection Approach

Conventionally, changes in migratory flows can be viewed in terms of both push and pull factors. As regards push factors of the migration to Hokkaido, we have already discussed in Section II the socio-economic processes of unwealthy ex-samurais and landless peasants being pushed out of Honshu in search of better economic opportunities on the frontier land of Hokkaido. For this reason, the analysis of this section concentrates on some major pull factors which operated in the Hokkaido migration. As part of its Ten Year Plan, the Development Office put several important migration policies into effect. The plan encouraged an inflow of migrants from Honshu so as to secure the manpower to facilitate Hokkaido's development.

Although a limited number of migrants had been sent to Hokkaido by the Tokugawa Shogunate Government for the purpose of national defense from a possible colonization of Hokkaido by Russians, large-scale migratory movements from Honshu to Hokkaido were implemented after the Meiji Restoration. Through the implementation of this Ten Year Plan, the Development Office played a pivotal function for expanding Hokkaido's human resources.

In 1869 the "In-migration Assistance Law" was enacted, and based on this law, the Development Office compelled a group of about five hundred persons to move from Tokyo to Hokkaido. These in-migrants were provided by the Government with extremely heavy financial assistance; they received not only travel allowances but also housing, food-stuff and other settlement funds for their first three years. However, in-migrants ran away from the settlement sites after the first three years. The principal reason for this failure is that the majority

of these in-migrants were vagrants or social rejects.

The Development Office learned a lesson from this failure. In its Ten Year Development Plan, the Development Office abolished government subsidies to migrants, and restricted to voluntary migration. This change in the government position in the migration policy was reflected in the 1874 regulations on government assistance extended to migrants.

In 1872, the Development Office introduced the "tondenhei" (military farmers) system by which the Meiji Government aimed at settling ex-samurais in an organized manner, primarily for national defense and partly for assisting destitute, low-ranking ex-samurais, and constituting the core of the labor force to be employed for the development of Hokkaido. In 1873, the first batch of 965 tondenheis of 198 households was settled in a village near Sapporo, the capital of Hokkaido. In the next year, a total of 1,174 persons of 275 households migrated. Fifty-six persons of 10 households and 81 persons of 19 households settled in 1878 and 1881, respectively. Each tondenhei family received travel allowances, housing, furniture, bedclothes, farming tools, seeds, rice, salt, tea, and money, and 1.67 hectares of land. Each of these tondenheis was required to have at least two family members to help him do farming. The operation of the village and farms was based on strict military-like orders under the leadership of the chief of each village. From April through September their main activity was farming, and for the rest of each year they had military training.

With a decline in the military role of tondenheis as a result of diminished possibilities of military aggression from the north, tondenheis' primary role gradually shifted to that of Hokkaido's development. Consequently, the targeted group of this system was changed from ex-samurais to civilians in 1890. The tondenhei system continued to be in effect until 1904, and a total of 39,911 persons of 7,337 households migrated to Hokkaido under this system. Although the quantitative impact of these tondenhei migrants on the overall Hokkaido development was rather modest, experiences learned from this system were actually utilized as valuable lessons for implementing subsequent settlement projects in Hokkaido (Okazaki, 1981).

In 1897 the "Regulations on Travels for Permanent Migrants to Hokkaido" were established. By these regulations migrants were able

to move to Hokkaido free of charge. Over the period of 1897-1882, a total of 2,392 migrants took advantage of these regulations. In 1882, regulations were, however, revised to provide financial assistance for travel only to those whose financial resources were extremely limited. As a result of the revision of these rules, the volume of in-migration to Hokkaido diminished to a substantial extent. These rules on the subsidization of travel costs were revised again in 1883, which enabled providing financial assistance in travel for permanent in-migrants. As a consequence, migration flows to Hokkaido became reactivated. These changes in migration policies directly affected the volume of migration, particularly by landless farmers and poor ex-aristocrats.

In support of these migration policies, land policies were revised on a step-by-step basis. First of all, "Hokkaido Land Selling and Leasing Regulations" and "Real Estate Regulations" were put into effect in 1872. These legal arrangements provided a basis for classifying the land of Hokkaido into privately-owned and nationally-owned land, thus establishing a modern land ownership system in Hokkaido. The former regulations stipulated that (i) the validity of earlier free land grants was acknowledged, (ii) the area of new arable land sold by the Government was restricted to 33 hectares per person, (iii) the price of land varied with its quality and (iv) if the land was not cultivated within a specified time period (which is subject to the land's location and condition), the land had to be returned to the Government. Secondly, the "Regulations Concerning the Sale of Undeveloped Land" were announced in 1877. Under these regulations, the land tax rate for Hokkaido was set to 1 percent of the land value, while that for the rest of Japan, 2.5 percent. This preferential land tax rate, acting as a strong economic incentive to mainlanders, induced a considerable inflow of disenfranchised samurais and landless farmers into Hokkaido.^{8/}

B. Hokkaido Agency (from 1886)

Because of the 1882 political scandal (Lockwood, 1954), the Development Office was abolished, and in the following four years the development of Hokkaido was guided under the Three Prefectures/One Department System. Although basic development objectives and strat-

egies for Hokkaido remained unchanged, this system could not make satisfactory achievements primarily because of the reduced administrative efficiency and the depressed national economy caused by the Matsukata deflationary policy (Hokkaido and Tohoku Development Finance Corporation, 1977). In 1886 this shortlived system was replaced by the Hokkaido Agency.

The establishment of the Hokkaido Agency roughly coincided with the take-off of the Japanese national economy. Reflecting the accelerated industrial growth of the Japanese economy, Hokkaido's production pattern also changed significantly during the latter half of the Meiji Era, as shown in columns (1)-(3) of Table 1. The governmental role in the development of Hokkaido was shifted to a more indirect approach; rather than making its own investments directly in productive sectors, the Government aimed at improving and augmenting

Table 1. Output by Industry, 1886-1919

Year	Sectoral Classification			Hokkaido's Output Net Domestic Product (percent)
	(1) Fishery (1,000 yen)	(2) Agriculture/ Forestry (1,000 yen)	(3) Manufacturing/ Mining (1,000yen)	
1886	4,540	852	u	0.68
1897	13,998	7,152	7,369	1.65
1900	12,391	13,391	11,166	1.62
1903	13,408	17,905	12,970	1.72
1906	10,369	28,545	20,954	1.83
1909	10,590	29,574	21,681	1.71
1911-13	32,400	54,120	33,480	2.61
1914-16	39,444	77,331	56,225	3.45
1917-19	73,008	205,452	189,540	4.30

Source: M. Enomoto and N. Kimi, Hokkaido no Rekishi (History of Hokkaido), Yamakawa Publishing Company, 1969.

u-unavailable

Hokkaido's infrastructure to facilitate its regional industrialization through investment activities by wealthy private industrialists. As a result of this change in the development policy, private capital played a principal role in Hokkaido's development in the latter half of the Meiji period. It is extremely important to note that this change in the principal driving force of Hokkaido's development from the Government to private sectors was indeed initiated by the Government itself. In other words, this change was planned and programmed. This shift in the government's role in the regional development strategy was directly reflected in the nature of its subsequent comprehensive development plans.

1. The Hokkaido Ten Year Plan and The Fifteen Year Plan

One of the major factors contributing to the upsurge of industrial sectors in Hokkaido was the transfer of government-owned factories to private entrepreneurs. To reduce its financial burden, the Development Office started transferring its factories to private sectors from 1878. The Hokkaido Agency carried on these transfers until 1890. These transferred factories laid strong foundations for the subsequent growth of Hokkaido's industrialism.

In addition to these transfers of government factories to private sectors, the "Hokkaido Ten Year Plan" implemented by the Hokkaido Agency in 1902 deserves credit for making plans for its developmental efforts on a comprehensive basis with partial funding from the central Government. One of the main objectives of this plan was to strengthen and widen economic foundations with various public works projects such as the construction of roads, bridges, drainage, and ports. These public works projects amounted to 85 percent of the total budget. (This percentage is much higher than that of the Development Office Ten Years Plan). Unfortunately, in its ninth year this plan was abandoned as a result of the outbreak of the Russo-Japanese War. The amount of actual expenditures for the nine years totalled 10.5 million yen, which was only 48.4 percent of the total expenditure originally proposed. These actual expenditures corresponded to only 1.4 percent of the average annual government expenditure during this time period. It is clear that as compared with the Development Office Ten Year Plan, this new Ten Year Plan required less government involvement.

Subsequent to the "Hokkaido Ten Year Plan," the Hokkaido Agency formulated the "Hokkaido Colonization Fifteen Year Plan" in 1910 and implemented the plan from 1911. As distinct from previous development plans for Hokkaido, one of the major characteristics of this long-term plan was the principle of financial self-sufficiency. The financial base of this plan laid in national tax revenues collected from Hokkaido. Similar to the "Hokkaido Ten Year Plan," the "Fifteen Year Plan" was amended due to changing conditions of the national economy; the time span of the plan was extended due to the recession at the end of the Meiji period, and subsidies for the national railway system were augmented with the occurrence of World War I. The total expenditure for the entire period amounted to 160 million yen, which was approximately 75 percent of the total planned expenditure. This actual expenditure was equivalent to 6.6 percent of the average annual government expenditure over the period of this development plan. It should be noted that most of the funds in the beginning part of the plan was allocated to public works projects.^{9/}

As a result of the implementation of these comprehensive, infrastructure-based development plans, the industrial capitalist sought to maximize profits by exploiting Hokkaido's natural resources and developing new markets for their industrial products. Coal-mining and railway were two major initiators of Hokkaido's industrialization. The production of cement, paper and pulp, and timber started to grow at the end of the 19th century, and flourished in the 1910s. In addition, steel and electric power industries, which commenced their operation after the turn of century, accelerated Hokkaido's industrialization. In 1920, total industrial production finally surpassed total agricultural production.

Note, however, that part of the capital formed in private sectors was geared to agricultural development. The private capital went a long way toward diversifying and expanding agricultural production. In the 1880s, the production of flax and indigo was promoted. In the 1890s, anilin, India Indigo, soy beans and red beans became main agricultural produce. The agricultural production pattern was greatly diversified from barley to rapeseed, mint, chrysanthemums and sugar beets. Much of the agricultural produce was the successful outcome of cooperative developmental efforts at local levels by the tondenheis

and the private in-migrants. With diversified agricultural products and capital flow in from Honshu, the food processing industry developed rapidly.

Moreover, organized financial institutions became involved in the growth of agricultural production. For instance, one can attribute the rapid growth of rice cultivation partly to the availability of long-term loans from the Japan Industrial Promotion Bank established in 1879, and partly to financial assistance to farmers from the Hokkaido Land Development Association of 1902.

At this time, a few additional words seem in order pertaining to the basic nature of both Ten Year and Fifteen Year Plans. These development plans were formulated to build up Hokkaido's infrastructure, which in turn, reinforced the rapid development of the national economy, as represented by the growing share of Hokkaido's output in the net domestic product in Table 1. The actual implementation of these plans, however, was significantly revised, subject to changes in the structure of the national economy and its needs. The economic development of Hokkaido was adversely affected by sudden discontinuities and/or amendment of development plans due to the changing needs of the national economy. In this light, Hokkaido's development was given secondary priority, though it greatly contributed to the national economy through its supply of abundant natural resources and the provision of expanded markets for commodities produced and for surplus labor.

Secondly, the development of industrialization which occurred in Hokkaido in the second half of the Meiji Era is clearly different from that of the rest of Japan; the former depended largely upon natural resources available on the island while the latter heavily imported them from abroad. Hence, Hokkaido's experience may provide a useful model in which local natural resources are fully utilized for local development purposes (Itagaki and Sakamoto, 1960). Also, a substantial part of Hokkaido's industrial growth was attributable to that of the agricultural processing industry. For this reason, agricultural and industrial development in Hokkaido were closely linked, unlike that of the national economy.

2. Migration Policies: An Indirect Protection Approach

After the Hokkaido Agency was established in 1886, Hokkaido's migration policies were drastically changed. As opposed to the previous migration policy which emphasized the provision of direct protection, the new migration policy was programmed to be more of indirect protection. As discussed previously, towards the middle of the Meiji Era a mass of landless farmers and poor ex-samurais constituted a considerable part of the surplus labor in Honshu. Since the labor market in Honshu was not yet fully developed at the time, it was only natural that the surplus labor gravitated to Hokkaido. For these reasons, no direct protection was needed any longer for inducing an influx of migrant laborers to Hokkaido. More importantly, the principal emphasis of Hokkaido's development was shifted from labor to capital inflows. In other words, migratory moves were considered as one of the concomitants of capital inflows.

The combination of capital and labor accelerated the tempo of Hokkaido's industrial development. The labor force required for Hokkaido's industrialization was recruited from Honshu as well as from Hokkaido. For example, one major paper plant, then the largest one in Asia, was constructed in Tomakomai in 1907. As an incentive for the company to construct its plant there, the city of Tomakomai promised to provide a total of 1,000 workers. Because both local agriculture and fishery started to decline at that time, surplus labor was available. The remainder of labor required for its construction was hired from Honshu through various channels including employment agencies.

Another source of manpower utilized for Hokkaido's industrial development was forced labor. In connection with the sale of the Horonai Coal Mine from the Meiji Government to the Hokkaido Coal Mine and Steamship Company, the former provided the latter with prisoners as free laborers (Yoshida et al, 1975). Furthermore, in the formative stage of Japanese capitalism in the 1890s, a sizable group of laborers was recruited for most of the railway development projects. This forced labor was also used extensively for Hokkaido's development in other development projects such as the construction of irrigation systems, rice paddies, ports and roads.

The new migration policy in favor of "the migration of private

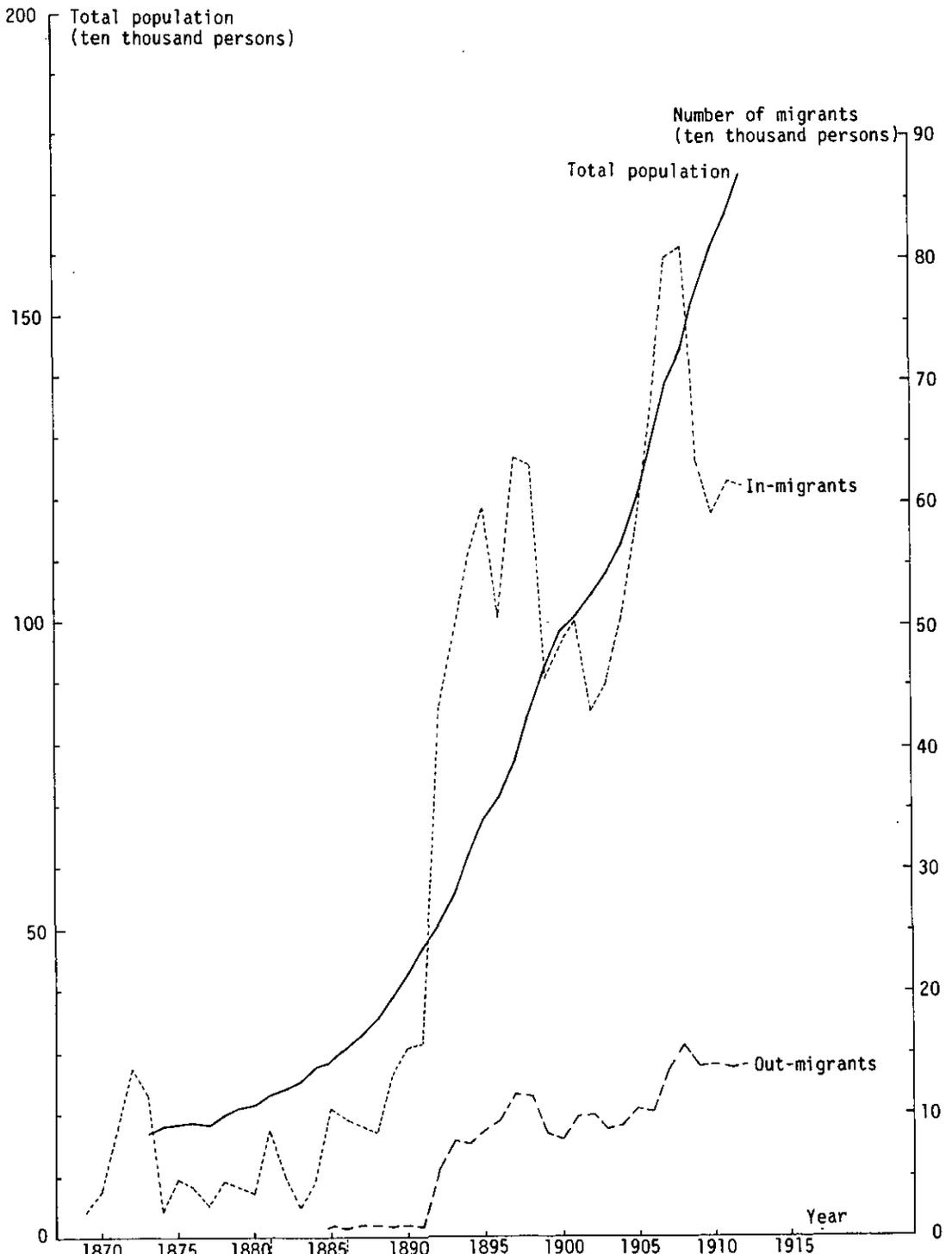
capital" rather than "the migration of labor" called for changes in the land scheme. In 1886 the "Hokkaido Land Allocation Regulations", which replaced the "Hokkaido Land Selling and Leasing Regulations" of 1872, allowed the transfer of a maximum of 33.3 hectares of nationally-owned land, to applicants at a rate of 1 yen per 0.33 hectares. However, this arrangement was not applied to farmers interested in undertaking large-scale farming. Because of this exceptional arrangement, part of the capital formed in private sectors was geared to agricultural investments, thus causing the emergence of absentee landowners with large tracts of land. These tendencies became more pronounced with the establishment of the "Hokkaido Public Undeveloped Land Allocation Law" of 1897. This law was enacted with a view to inducing wealthy capitalists' investments. Accordingly, large-scale cultivation spread rapidly, but this legal arrangement led not only to unprecedented land development but also to a skewed land-holding pattern and endless land speculation.^{10/} At the same time, undeveloped land in Hokkaido became increasingly scarce toward the end of the Meiji period, leaving only untapped land of poor quality and thus reducing Hokkaido's capacity of absorbing the excess population from Honshu.

Subsequent to the promulgation of the "Land Allocation Regulations" of 1886 and the "Hokkaido Public Undeveloped Land Allocation Law" of 1897, a vast number of tenants were brought over to Hokkaido. The percentage of agricultural in-migrants (mostly tenant farmers) was 27 percent in 1892, 57 percent in 1899 and 59 percent in 1907. Most of these agricultural in-migrants came to Hokkaido as a result of the recruitment by owners of large farms.^{11/}

IV. Population Growth and Distribution in Hokkaido

Through these different migration policies at different stages of its economic development, the pattern of Hokkaido's population growth changed considerably (Kobayashi, 1981). As shown in Figure 2, the population of Hokkaido grew from 0.168 to 1.739 million over the period of 1869-1912. It should be noted, however, that even though the growth of the Hokkaido population was substantial during the period of direct assistance in migration, it increased more rapidly during the period of indirect assistance in migration. The

Figure 2. Population of Hokkaido and Its Migratory Flows, 1869-1912



Development Office	Three Pref.	Hokkaido Agency	Administrative Structure
Direct Protection	Indirect Protection		Migration Policies

average annual population growth rate for the period of 1869-1886 was 4.8 percent, and 7.0 percent for 1886-1912. During the Meiji Era, Hokkaido's population grew much more rapidly than that of the whole country, as presented in Table 2. In 1873 the population of Hokkaido was only 1.46 percent of the national population, but it expanded up to 3.45 percent by the end of the Meiji Era. This relative growth in comparison to that of the whole country became very pronounced after the inception of indirect assistance in migration.

The main source of the growth of Hokkaido's population was from migratory inflows rather than fertility (Kobayashi, 1981). This is partly reflected by changes in the sex ratio of the population of Hokkaido. Table 2 clearly shows the existence of sex-selectivity in the migration of the Japanese population to Hokkaido at its early development stages. Also, the occupational composition of the in-migrants to Hokkaido changed considerably, as indicated in Table 2. The relative size of agricultural in-migrants was directly affected by changes in migration and land policies, and conditions of the national economy. Although there were a number of fluctuations in the percentage distribution of agricultural in-migrants from year to year, one may conclude that in the second half of the Meiji Era the majority of the in-migrants were basically agriculturally-oriented.

In the next section, we will compare the Hokkaido experience with Malaysia's FELDA scheme. A comparison of these two cases will enable us to clarify similarities and dissimilarities between these two migration programs, thus providing a useful base for evaluating the applicability of the Hokkaido experience to the Malaysian context.

Table 2. Selected Demographic Statistics
for Hokkaido, 1873-1912

Year	Proportion of Hokkaido's Population to Japan's Total Population	Sex Ratio of Hokkaido's Population	Proportion of Agricultural In-migrants to All In-migrants
1873	0.46	1.19	n.a
1874	0.48	1.24	n.a
1875	0.49	1.19	n.a
1876	0.50	1.19	n.a
1877	0.49	1.18	n.a
1878	0.52	1.23	n.a
1879	0.55	1.25	n.a
1880	0.56	1.21	n.a
1881	0.61	1.21	n.a
1882	0.62	1.18	n.a
1883	0.65	1.17	n.a
1884	0.71	1.21	n.a
1885	0.73	1.18	n.a
1886	0.78	1.18	n.a
1887	0.83	1.14	n.a
1888	0.89	1.14	n.a
1889	0.97	1.15	n.a
1890	1.06	n.a	n.a
1891	1.15	n.a	n.a
1892	1.25	n.a	27.14
1893	1.36	n.a	39.52
1894	1.49	n.a	42.46
1895	1.63	n.a	46.26
1896	1.70	n.a	44.10
1897	1.85	n.a	54.04
1898	1.98	1.17	54.54
1899	2.13	1.15	57.10
1900	2.25	1.13	53.88
1901	2.29	1.15	47.04
1902	2.34	1.14	45.24
1903	2.38	1.12	45.16
1904	2.46	1.12	48.66
1905	2.58	1.12	52.26
1906	2.75	1.13	56.54
1907	2.93	1.14	58.44
1908	3.02	1.10	56.22
1909	3.24	1.13	54.20
1910	3.28	1.14	52.24
1911	3.35	1.14	56.94
1912	3.45	1.15	54.29

Source: Hokkaido Agency, Hokkaido Shi (History of Hokkaido),
Sanshusha Publishing Company, Tokyo, 1918.

n.a. - not applicable

V. Land Development in Malaysia: the Role of the Federal Land Development Authority

While there are many areas of convergence between the experiences of land development in Hokkaido and Malaysia, the pattern of development in the latter possesses some distinctive features. For one thing, the history of land development in Malaysia is not a very long one. For another, the entire enterprise is government sponsored, although administration and implementation is in the hands of a number of agencies.

The most important of these is the Federal Land Development Authority (FELDA). Established in 1956, the agency was perceived of as an instrument in the Government's program of poverty eradication and economic development. In the year immediately before the nation's independence from Britain,^{13/} its economy was characterized by a high degree of dependence on two primary commodities-rubber and tin-and by widespread rural poverty in spite of fairly rapid economic growth.^{14/} Since the rubber industry was dominated by the commercial estate (large holdings) sector and since this provided the primary impetus to growth, there was a perception that government efforts should not only be concentrated in the agricultural sector, where the incidence of poverty was highest, but also in the cultivation of rubber which, in the years of the Korean War, had yielded high income to planters. It was felt that the dynamic estate sector, which was largely in the hands of private enterprises, many foreign, could not be counted upon to achieve the social objective of poverty eradication as profit maximization by them would not normally coincide with the maximization of the social rate of return. Indeed, the estate sector was a major source of economic dualism in the country. Government initiative was therefore necessary. On the recommendation of a government working committee, the Land Development Ordinance was passed in July 1956, and FELDA was established as a consequence.

The history of land development in Malaysia did not begin with FELDA, however. Indeed, the "Emergency"-the term used to refer to the period of Communist insurgency between 1948 and 1960-was responsible for the creation of "New Villages," nucleated settlements surrounded by defensive perimeters and populated by rural inhabitants

mostly of Chinese origin. At the height of the Emergency between 1950 and 1952, an estimated 548 thousand people were resettled in these villages.^{15/} The primary motive in the development of land and resettlement of persons therein was therefore strategic and political rather than economic.

Politics was also not absent in any consideration of the motives leading to the establishment of FELDA, and indeed of other land development agencies. Since the rural population was predominantly Malay, rural development might be seen as being largely beneficial to this group. Indeed, it has been alleged (Tunku Shamsul, 1980:1) that so occupied was the government with catering to their needs that the entire policy for rural or land development was predicated upon the assumption, subsequently proved invalid, that rural Malays were likely to remain rural, given better income and standards of living.

Another point worth noting is that while FELDA may be considered Malaysia's first land development authority, two states had also, in the late 1950s, started block planting schemes. An expansion of the program saw the establishment of Fringe Alienation Schemes. Other agencies were created in the period 1960-1970, so that by the end of the period, there were, in addition to FELDA schemes, Fringe Alienation Schemes, Controlled Alienation Schemes and land schemes of the Rubber Industry Smallholders Development Authority (RISDA) (which were generally smaller and more limited in scope with respect to government participation and which involved inhabitants within the districts), State government schemes operated by respective State Economic Development Corporations (SEDCs), Youth Land Schemes, etc.^{16/} In addition, some FELDA land schemes were located within the boundaries of regional development authorities. However, as will be clear from the statistics in Tables 3-5, there is little doubt that FELDA is the most important agency undertaking land development.

Over the last two decades, not only has the pace of land development accelerated but also the approach adopted by FELDA has undergone considerable modification. Firstly, while the original objective of FELDA had been to minimize capital investment without jeopardizing the success of the schemes, the failure of some schemes to perform satisfactorily (e.g. poor cultivational practices) brought about greater and more direct financial commitments from the government.

Table 3. Malaysia - Public Development Expenditure for Agricultural, Land and Rural Development, 1971-1985
(million Malaysian \$)

Expenditure category	Second Malaysia	Third Malaysia	Fourth Malaysia
	Plan 1971-75	Plan 1976-80	Plan allocation 1981-85
Agricultural and Rural Development	1,793.53	4,672.41	8,359.09
Land and Regional Development	1,071.66	2,751.88	3,732.57
FELDA 1/	678.41	1,732.71	2,040.96
FELCRA 1/	50.96	192.80	472.08
Regional Development Authorities:			
Pen. Malaysia 2/	238.19	711.22	1,049.03
East Malaysia 3/	37.73	102.50	142.50
Others 3/	66.37	12.65	28.00
Land and Regional Development/Agriculture and Rural Development (%)	59.75	58.90	44.65
FELDA/Land and Regional Development (%)	63.30	62.96	54.68
Regional Development Authority/Land and Regional Development (%)	25.75	29.57	31.92

1/ Federal Land Consolidation and Rehabilitation Authority.

2/ Consisting of the Pahang Tenggara Development Authority, Trengganu Tengah Development Authority, Johor Tenggara Development Authority, Kelantan Selatan Development Authority, Kelantan Development Authority and the Jengka Triangle.

3/ Consisting of the Bintulu Development Authority, Sabah Land Development Board and Sasawak Land Development Board.

4/ Includes the Security Land Scheme in Pahang.

Source: Malaysia (1981), Tables 6-2 and 13-1.

For instance, before 1960, FELDA functioned as a loans board, channelling Federal funds towards State Land Development Boards, which actually undertook land development. In 1961, however, the National Land Council decided that FELDA be engaged directly in the administration and implementation of projects.^{17/} Contractors also replaced settlers in land-clearing work.

One argument advanced in favor of greater financial involvement was that the planting of the perennial crops, rubber and oil palm required high standards of cultivation practices in the earlier years of the crops.^{18/} However, while perennial crops continued to dominate in FELDA schemes, there was a major shift from rubber to oil palm in the mid 1960s. Oil palm cultivation was first introduced into the schemes in 1961; by 1971, 53 percent of the total agricultural area developed by FELDA was planted with this crop.

Changes in the government's perception of rural development also brought changes in the approach towards land development. Prior to 1970, the latter was thought of as an instrument for reducing, if not preventing, rural-urban migration, a process that was thought of as leading to overcrowding, the growth of squatter settlements in urban areas, and to underemployment in the countryside. It was also believed that rural Malays, given higher incomes and standards of living, would have remained rural. The fallacy of this view was demonstrated by the race riots in May 1969, which involved mainly urban Malays, and which brought home to government the need to reassess its policies towards rural-urban migration. Thus, while the First Malaysian Plan of 1966-70 gave priority to the development of "sufficient new land to keep pace with the formation of new farm families" (Malaysia, 1965:2), leaving urban development "largely in the hands of private enterprise" (Malaysia, 1965:30), the Second Malaysia Plan, 1971-75, saw "the migration of rural inhabitants to urban areas (as being) essential to economic balance between the urban and rural areas and the elimination of the identification of race with vocation as well as location."^{19/} (Malaysia, 1971:45).

In response to this policy shift, FELDA took the first steps towards integrating rural and urban activities. Thus, in the choice of settlement pattern, the nucleated settlement, with an average of 400 families, was selected, while attention was paid to the size of settlements to ensure that they were large enough to support a minimum

acceptable level of commercial activity.^{20/}

A major change in FELDA's ownership policy was also conducive to the development of urban activities in FELDA settlements. This was the adoption of communal cultivation (called the "block group method") in 1971. Prior to that year, ownership of a parcel of land (of a predetermined size) was passed on to the settler and his family, but the new arrangement called for the distribution of shares instead. This made it much easier for settlers to be centrally located, in the same way as workers on large commercial plantations. Further, the development of new urban growth poles as part of the regional development strategy also envisages a hierarchy of urban centers of different sizes serving as focal points for their respective rural hinterland. Among the major activities of these centers would be agricultural processing, marketing as well as the provision of maintenance, repair and other services in support of the agricultural sector. Under the Third Malaysia Plan, a total of 23 such towns were targeted for construction (Malaysia 1976:86). FELDA settlements were to be part of this hierarchy, while its holdings were part of the hinterland.

FELDA itself progressively undertook the downstream activities of processing and marketing rubber and oil palm. Joint ventures with other government agencies or with private companies have set up since 1971. By 1980, corporations engaged in trading, marketing, latex handling, transport, mills, security services, agricultural services and construction earned FELDA over-covered sugar refining, bulking and palm oil refining.^{21/}

Although the primary objective of land development is poverty eradication rather than population relocation, the projects undertaken by FELDA have nevertheless a major impact not only on the size but also on the composition of the migrant stream. The number of FELDA settler families by the end of 1980 totalled 64,063, or assuming an average family size of five, about 320,000 persons.

Table 4. Malaysia - Progress in Land Development, 1961-1980 and Targets, 1981-1985
(thousand acres)

Type of Development	1961-1965	1966-1970	1971-1980	A/T (%)	1981-1985 Target
	Achievement	Achievement	Target		
<u>Federal Space Programs</u>					
FELDA	119.3	187.0	527.5	86.4	197.9
FELCRA	119.3	179.0	365.6	102.2	149.8
RISDA	-	8.0	60.7	83.5	32.7
	-	-	101.2	31.1	15.4
<u>State Programs</u>					
Pen. Malaysia	258.6	132.3 ^{1/}	233.7	124.1	217.2
Sabah	8.0	74.3	75.9	205.1	143.9
Sarawak		58.0	67.6	85.5	56.7
			90.2	84.9	16.6
<u>Joint Venture/Private Sector</u>					
	166.2 ^{2/}	181.8 ^{2/}	134.6	89.2	128.4
TOTAL			895.9	96.7	543.5

1/ Covers Controlled Alienation Schemes, Youth Schemes, Fringe Alienation Schemes and Block Planting Schemes.
2/ Includes public sector and some state schemes.

Sources: Malaysia (1971), Table 9-2, pp. 125-6, Malaysia (1981), Table 15-2, p. 270.

Table 5. Malaysia - Land Development by State, 1971-1980

Income group	State	FELDA	FELCRA	RISDA	Regional authorities	State agencies	Private sector	All agencies	FELDA as percent of total
High	Selangor	0.3	-	-	-	10.2	8.2	18.8	1.6
Middle	Johor	81.6	12.8	2.3	16.3	18.7	11.0	142.8	57.1
	Melaka	2.1	1.6	-	-	-	3.3	7.1	29.6
	N. Sembilan	62.7	6.7	2.8	-	5.6	12.9	90.7	69.1
	Pahang	164.9	8.1	10.4	18.2	47.0	13.5	262.2	62.9
	Perak	17.1	9.3	7.2	-	13.5	7.2	54.4	31.4
	Penang	-	-	-	-	-	-	-	-
Low	Sabah	1.4	-	-	-	57.8	-	59.2	2.4
	Sarawak	-	-	-	-	76.6	-	76.6	0.0
Low	Kedah	6.9	4.4	1.3	-	10.9	0.2	23.7	29.1
	Kelantan	10.7	1.3	7.3	5.7	11.0	0.3	36.5	29.3
	Perlis	3.2	-	-	-	-	-	3.2	100.0
	Trengganu	22.7	6.2	-	15.6	41.5	4.6	90.7	25.0
	Percent of total	373.7	50.7	31.3	55.8	293.0	61.3	866.0	43.2

Source: Malaysia (1981), Table 5-5, p. 110.

Table 6. Peninsular Malaysia: The Number of FELDA Settlers and not Interstate Migration, by State, 1957-1970

	No. of FELDA settlers settled, end-1973 ('000)	Net interstate migration 1957-1970 ('000)
Johore	6.8	(-) 5.0
Kedah	1.5	(-) 25.4
Kalantan	-	(-) 47.8
Melaka	0.9	(-) 40.3
N. Sembilan	3.0	(-) 21.6
Pahang	9.8	65.8
Penang	-	(-) 20.0
Perak	2.3	(-) 114.3
Perlis	-	3.1
Selangor	1.8	119.7
Trengganu	1.9	6.0
Total	28.1	0.0

Sources: FELDA, Malaysia (1976).

In fact, the number of persons relocated may be larger than this. An estimate by MacAndrews and Yamamoto (1976) of the number of settlers and their family members relocated between 1957 and 1970 puts the figure at 130,525 persons. If the number of FELDA staff, factory and support staff, nurses, teachers and other personnel were included, this figure would have been inflated to 145,373, or an increase of 11.4 percent. This latter figure did not include casual labor employed by contractors to clear land for settlement.^{22/} As Table 6 shows, this represents a significant proportion of net internal migration in West Malaysia between 1957 and 1970.

The typical FELDA settler is 18-35 years of age, married and usually with children, landless or with an uneconomic size of holding (below two acres), and comes from an agricultural background. These characteristics have been determined by the criteria used for selection of settlers, so that the latter has a major bearing on the composition of the migrant stream. Sample surveys of settlers show further that:

- (1) The labor force participation rate among settlers was some 62 percent, which is higher than the national average of 52.2 percent in 1970 (MacAndrews and Yamamoto, 1976). This primarily reports the young age composition of these settlers.
- (2) With the exception of the state of Pahang, most settlers originated from within the state. This is in line with what has been observed for the total migrant stream between 1957 and 1970.^{23/}
- (3) The degree of mobility, measured by attitudes and the number of moves made, was higher among the younger settlers.
- (4) The degree of mobility was affected by the settlers' previous occupations; for instance estate workers were more ready to move than smallholders (MacAndrews and Yamamoto, 1976).

VI. A Comparative Analysis of the Hokkaido and FELDA-Malaysia Experiences

A comparison of the histories of the Hokkaido and FELDA migration streams reveals interestingly the similarities as well as dissimilarities. To begin with, the motive for relocation of people in the first instance for both cases was strategic rather than economic. Hokkaido was developed in the Meiji period to protect Japan from possible colonization by Russia. In Malaysia, the first settlement schemes--the "new villages"--were established primarily in response to Communist terrorist activities in the country. The emergence of the economic motive was also a common feature; the need to create employment for the ex-samurai class in Japan is paralleled by the objective of poverty eradication in Malaysia.

In the selection of migrants, the experience of Hokkaido in the late 1860s is replicated in the FELDA schemes in their infancy in the late 1950s and early 1960s. In the former case, immigrants, despite heavy government financing, did not stay long in their new environment. Failure to select migrants properly resulted in the relocation of vagrants who were not committed to development. Similarly, in the earliest FELDA schemes, inadequate screening of potential settlers resulted in poor maintenance and cultivation practices, and forced government to take a more direct part in the management of the schemes. The fact that perennials--rubber and oil palm--were grown in FELDA schemes made it especially important that proper cultivation methods are practised.

Land ownership is a major factor in the success of land development in both cases. In Hokkaido, the "Land Selling and Leasing Regulations" of 1872 provided the basis for a modern system of land ownership. In Malaysia the attraction of land ownership, and an economically viable size of holding, was reported to a major factor inducing potential migrants to FELDA schemes. The same motivation, it is hoped, would prevent settlers from moving away from the schemes.

From a demographic point of view, occupation-selectivity is a characteristic of both migration streams. Since the early days in Hokkaido's development, but particularly in the second half of the Meiji Era, in-migrants with agricultural backgrounds dominated. The predominance of agricultural workers among FELDA follows from these

being the target clientele of the government's strategy of land development, and is a consequence of the selection criteria.

Apart from these similarities, due to the different approaches to development of Japan and Malaysia, there are some differences. The industrial structure of Meiji Japan developed without any major colonial influences. The result was a much closer linkage between various sectors of the economy. In Malaysia, which did not achieve independence from Britain until 1957, the "vent for surplus" policy typical of colonial economic regimes has resulted in the production of primary commodities for export, a high degree of export concentration, very little processing of output, and substantial foreign investment in the agricultural sector. The result has been a socio-economic structure in Malaysia which is substantially different from that in Hokkaido.

Nowhere is this more amply demonstrated than in the relationship between agriculture and industry. As mentioned above, the close linkage between these sectors which dates from the early Meiji period in Japan is a consequence of the country's history of economic development. This linkage worked in two ways. Firstly, surpluses generated in agriculture were shifted, via appropriate government measures, to promote industrial development. Secondly, surplus labor from the agricultural sector moved to work in the industries. In Hokkaido, factories built by the government served both as markets for the agricultural output and, in time, as a supplier of goods to the sector. In the initial stages, the costs of implementation to the government were high, and efficiencies of projects often poor.

In Malaysia, integration between agriculture and industry was never developed. Indeed the history of economic growth has been characterized by considerable dualism--between agriculture and industry on the one hand, and between commercial and subsistence agriculture on the other. Abject poverty and inequality of income was a characteristic of the population in the 1950s, and FELDA, as well as other agencies, was established to deal with this problem. The role of the government, not insignificant even at the beginning, expanded rapidly, and by 1970, the agency was not only responsible for the implementation of land development and administration of settlement schemes but also engaged in activities like marketing and processing. Again in the early days, an objective of FELDA was to reduce urban-

ization, but the recognition of its inevitability and (subsequently) desirability has led to a change in policy. The development of integrated regional development projects incorporating rural-urban hierarchies of activities should bring about more linkages between agriculture and industry.^{24/} Yet, the role of government remains everywhere in evidence.

In Hokkaido, however, the period of direct protection was followed, after 1886, by less direct government support, and by a greater emphasis on private capital. This had the effect of inducing capital flows to Hokkaido, but also encouraging large-scale cultivation and skewed land holding patterns.

For Malaysia, there are important lessons to be learnt from this second phase of the Hokkaido experience. In the latter, successful development through immigration owed a great deal to endogenously generated technological change in agriculture, as well as to the interdependence between agriculture and industry. The momentum thus created permitted the government to reduce the degree of involvement in the development of the island. The success of the Malaysian/FELDA effort has hitherto depended entirely on a massive government input of manpower and capital. Not sufficient linkages have been built up to permit these settlements to survive without government management. The possible role of private capital merits serious consideration in this context. The establishment of joint-venture estates, as well as the award of management contracts to private companies may, however, be seen as steps in this direction.

At the same time, the ill-effects of uncontrolled private enterprise need to be taken into account. The suggestion to encourage private enterprise to participate is not an unqualified invitation to maximize profits at the expense of an equitable distribution of income.

VII. Acknowledgements

We are grateful to both Kiyohide Seki and Toshikatsu Oda for providing us with all the necessary data on Hokkaido's population.

Notes

- 1/ The applicability of the Meiji development experience has been intensively evaluated on the basis of an econometric model by Ogawa and Suits (1981).
- 2/ NUPRI and UNFPA, in close collaboration with Hokkaido University and in cooperation with the Hokkaido Prefectural Government, organized an International Seminar on "Planned Population Distribution for Development: Hokkaido Experience," from 19-23 May 1980 at Sapporo, Hokkaido. Twenty-two population policy-makers, development planners and migration experts from six countries--Indonesia, Japan, Malaysia, the Philippines, the Republic of Korea and Thailand--participated in this Seminar. The final report of the Seminar has been recently published by UNFPA (1981).
- 3/ It should be noted, however, that the cost of changes in the agricultural development process covered by the Meiji Government assistance was only four percent of the total public expenditure during the Meiji period. In comparison to the financial contributions made by the agricultural sector, this financial aid was insignificant (Oshima, 1965).
- 4/ In a less developed country where the primary economic activities lie in agriculture, the land tax system is a good source of revenue for the government because collection can be easily administered.
- 5/ Eighteen percent of the bond recipients were previously high-ranking, wealthy samurais while the remainder was a group of low-ranking, poor samurais. The majority of the bonds, however, was granted to the former type of recipients.
- 6/ In line with the fast growth of textile industry and the railway system, the coal market expanded tremendously after the Sino-Japanese War. Its production was only 0.93 million tons in 1882. It increased, however, to 2.61 million tons in 1890, 4.27 million tons in 1894 and 6.72 million tons in 1899. Its domestic consumption jumped at an equally fast rate: 0.86 million tons in 1886, 1.43 million tons in 1890, 2.41 million tons in 1894, and 5.03 million tons in 1899. In 1886, 30 percent of demand was derived from shipping and railway industries while factories consumed 17.1 percent. In 1890, the former consumed 37.1 percent and the latter, 29.7 per cent.
- 7/ It should be noted that the fishing industry, which was the main income source of the island in the early Meiji period, contributed heavy taxes to the Government partially to shoulder financial requirements for the implementation of the development plan. To boost the fishing industry, the Development Office permitted an increasing number of fishermen to be engaged in coastal fishery, and even paid their debts to users. At the early stage of Meiji development, the fishing industry produced 95 percent of the island's income. Although its importance declined gradually as a result of agricultural growth, fishing continued to be the primary income-generating sector in Hokkaido up until 1897.

- 8/ One of the salient examples of this type of migration is a group of ex-samurais who formed the "Kaishin-sha" in 1879.
- 9/ Since the time horizon of this Fifteen Year Plan ranges from 1910 to 1926, which goes beyond the time span of the present study, no further details will be given here.
- 10/ These adverse economic consequences put serious squeeze on the development of the pulp and paper industry at a later stage of Hokkaido's development in Meiji.
- 11/ One can classify types of Hokkaido's in-migrants on the basis of their socio-economic characteristics, their migration objectives, etc. For more detailed discussion, see Seki (1981).
- 12/ The geographical distribution of the population of Hokkaido started from the Ojima region in southwestern Hokkaido, and gradually moved northeasterly. By the end of the Meiji Era, one could observe in some parts of northern Hokkaido high population density (Suzuki, 1981).
- 13/ British Malaya became independent as the Federation of Malaya in August 1957. Malaysia, formed in 1963, consisted of the Federation, Singapore (which subsequently left) and the Bomer states of Sarawak and Sabah.
- 14/ See International Bank for Reconstruction and Development (1955), Lim (1973), Silcock and Fisk (1963) for accounts of the economic history of Malaya in these years.
- 15/ See Fisher (1964:609).
- 16/ In the case of Fringe Alienation Schemes, land developed for agriculture was typically close to existing villages, and initial development was undertaken by State governments with Federal government assistance. Youth Schemes were intended for unemployed youth, and were financed entirely by State governments. Settlers, given up to eight acres of land, had to repay a part of the cost of development. Controlled Alienation Schemes, also State-based, required individual settlers to develop the land using their own capital. See Malaysia (1971:125).
- 17/ See Lim (1976:10) who also provided figures of 14,600 acres planted in FELDA schemes in 1957-60, and 114,769 acres in 1961-65.
- 18/ See Surjit Singh (1974).
- 19/ The Plan also launched the "New Economic Policy," which has as its objectives the eradication of poverty and the restructuring of society "so as to reduce and eventually eliminate the identification of race with economic function" (p.1).
- 20/ Other considerations are the convenience of easy commuting, provision of infrastructure and security. See Surjit Singh (1974:4).

- 21/ See Malaysia, Federal Land Development Authority (1980).
- 22/ As these workers are only there during land-clearing operations, they are transients and should not be included.
- 23/ It must be borne in mind that certain states had established quotas whereby at least 50 percent of the settlers should come from the same state.
- 24/ These linkages are particularly important with the older land schemes facing the prospect of the so-called "second generation problem," (i.e., the tendency for the children of settlers to migrate to urban centers).

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