

**FRONTIER AREA DEVELOPMENT AND MIGRATION IN PAHANG,
MALAYSIA**

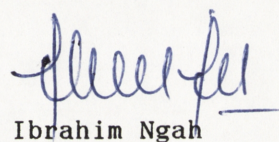
**By
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**A Thesis Submitted in Partial Fulfilment of the Requirement for
the Degree of Master of Arts in Demography in The Australian National
University**

October 1986

DECLARATION

Except where otherwise indicated
this thesis is my own work.

A handwritten signature in blue ink, appearing to read 'Ibrahim Ngah', with a horizontal line extending from the end of the signature.

Ibrahim Ngah

October 1986

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ABSTRACT

This study of frontier area development and migration in Pahang is carried out in the context of the inter-relationship of migration and development. The primary objectives are to examine the patterns of migration in Pahang in relation to the development of two frontier regions, JENGKA and DARA; to examine who were the migrants to the land settlement schemes in the frontier region; and what is the potential for out-migration from the land settlement schemes in the region.

The analysis was done using data from the 1980 population census, 1976 FELDA Settlers Census, a survey carried out by the author in 1986 and various reports from Regional Development Authorities (LKWJ and DARA).

The findings of this study show that the impact of development in JENGKA and DARA on internal migration in Pahang is significant. Migrants in the settlement schemes in the region tend to be induced migrants. Substantial out-migration occurs among settlers' children (second generation) from a settlement scheme in the region. The places of destination of out-migrants were mixed, but more migration occurs to other rural areas and over short distances than to urban areas and over longer distances.

GLOSSARY

- DARA- Development Authority of Pahang Tenggara
(Lembaga Kemajuan Pahang Tenggara)
- FELCRA- Federal Land Consolidation and Rehalibitation Authority
(Lembaga Pemulihan dan Penyatuan Tanah Negara)
- FELDA - Federal Land Development Authority
(Lembaga Kemajuan Tanah Persekutuan)
- LKPP- Pahang Agricultural Industrial Development Corporation
(Lembaga Kemajuan Perusahaan Pertanian Negeri Pahang)
- LKWJ- Development Authority of Jengka Region
(Lembaga Kemajuan Wilayah Jengka)
- KEJORA- Johor Tenggara Regional Development Authority
(Lembaga Kemajuan Johor Tenggara)
- KETENGAH- Terengganu Tengah Development Authority
(Lembaga Kemajuan Terengganu Tengah)
- MARDI- Malaysian Agricultural Research Development Institute
(Institut Penyelidikan Pembangunan Pertanian Malaysia)
- RISDA- Rubber Industry Small Holders Development Authority
(Pihak Berkuasa Kemajuan Pekebun Kecil Perusahaan Getah)
- RRMI- Rubber Research Institute of Malaysia
(Institut Penyelidikan Getah Malaysia)

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

The development of a 'resource frontier region' is one of the important determinants of internal migration in Peninsular Malaysia. Resource frontier region development, which was administered by the Regional Development Authority, covers a package of development programs including development of agriculture, agro-based industries, infrastructure, services and settlement schemes. It is part of the strategy of regional development which seeks to overcome the problems of inter-regional inequality of Malaysia.

"The regional development strategy under the New Economic Policy (NEP) seeks to bring about closer integration among the states of Malaysia. This will be achieved through redressing economic and structural imbalances among the regions within the country. It will draw and build upon the strengths of each region for agricultural and industrial development, particularly in less developed states, to ensure that regional development contributes towards the national goals for economic development. The underlying aim is equitable distribution not only of income but also of facilities for health, education, utilities, services, recreation, housing and most important, opportunities for social and economic advancement of the people in accordance with the goals of NEP." (Government of Malaysia, 1976:199)

The extensive development in the resource frontier region involves massive movement of people to the region, who will then settle in the planned settlement schemes. In the development plan it is stated that:

"In the light of unequal distribution of natural resources and population, selective relocation of people to areas where development opportunities and potentials exist will be a necessary element in the strategy for regional development. Such relocation is necessary to reduce pressures in areas where population density is high and the environment for development is less favourable, as well as provide the labour force needed for land settlement and other development projects in population scarce areas." (Government of Malaysia, 1976:199)

In more precise terms, it is intended to reduce excessive rural-to-urban migration, especially migration from depressed areas to the already congested core region of Kuala Lumpur-Kelang Valley (Johari, 1983).

In Pahang there are two resource frontier regions, the Development Authority of Jengka Region (LKWJ) area or JENGKA, and the Development Authority of Pahang Tenggara (DARA) area. The massive development activities in these areas have important implications for population movement in the State of Pahang. The population censuses of Malaysia in 1970 and 1980 show that there are substantial net inflows of migrants to the state of Pahang which could be related to the development projects in JENGKA and DARA. Pryor (1972:647), probably referring to JENGKA and DARA, suggested that further studies be conducted on the population redistribution implications of the large-scale land development and FELDA settlement schemes in Central and Eastern Pahang.

This study will first examine the pattern of internal migration in Peninsular Malaysia, and then examine the implications of frontier area development, particularly of the JENGKA region and the DARA region, for migration in Pahang. The following questions will be the main concerns in this study: To what extent does frontier area development influence migration in Pahang? Are migrants to frontier regions potential urban migrants or induced migrants? What is the potential for out migration from land settlement schemes in frontier regions? How do developments in frontier regions facilitate out migration in the long term?

1.2 The Patterns of Internal Migration in Peninsular Malaysia

Pryor (1972) analysed intercensal migration in Peninsular Malaysia in the period 1957-1970 using vital statistics and the population figures from the two censuses. He found that two states were experiencing net in-migration -- Selangor and Pahang. All other states had net losses with Perak experiencing the largest out-migration, followed by Johor, Negeri Sembilan, Kelantan, Kedah and Pulau Pinang, while Perlis and Terengganu appear to have balanced in and out-migration streams (Table 1-1). The net gain in the migration stream to Selangor

was mainly from Perak, Negeri Sembilan and Melaka, and to Pahang from Kelantan, Terengganu and Perak.

The net inflow of migrants to Selangor was due to the rapid growth of the Kelang Valley Region, which provides a wide range of secondary and tertiary employment. According to the Kelang Valley Report (1973), between the 1957 and 1970 censuses the region's population grew at an annual rate of 4.2 per cent against a national rate of 2.6 per cent. Of the total 431,000 labour force in 1970, 62 per cent were in the service sector, 19 per cent in manufacturing, 5 per cent in construction, 12 per cent in agriculture and 2 per cent in mining. The capital city of Kuala Lumpur, where Federal Government Agencies are located, also provided ample opportunities for potential migrants, especially for Malays (McGee, cited in Pryor, 1977:80).

In the case of Pahang, the net inflow of migrants was mainly due to the agricultural settlement schemes developed during that period. Of 124,860 hectares of land developed by the Federal Land Development Authority (FELDA) during the 1956-1970 period, about 40 per cent was located in Pahang. In the 1960s, 60 per cent of the total land alienated to private companies and projects under joint ventures was also located in Pahang (Senftleben, 1978).

Table 1-1: ESTIMATED NET MIGRATION BY STATES OF PENINSULAR MALAYSIA,
VITAL STATISTICS METHOD, 1957-1970

State	1957 Pop. (June 17) (1)	Intercen. Births (2)	Intercen. Deaths (3)	Natural Increase (4)= (2)-(3)	1970 Pop. (Aug 24) (5)	Intercen. Net Mig. (6)=(5)- (1)-(4)
Selangor	1012929	636252	115645	520607	1629386	95850
Pahang	313058	199456	44968	154488	503131	35585
Perak	1221446	712822	166100	546722	1562566	-205602
Johor	926850	587114	113218	473896	1273990	-126756
Negeri Sembilan	364524	232735	47029	185706	479312	- 70918
Kelantan	505522	316937	86849	230088	680626	- 54984
Kedah	701964	402190	103522	298668	955374	- 45258
Pulau Pinang	572100	304914	69725	230189	758770	- 43519
Melaka	291211	194504	41097	153407	403722	- 40896
Terengganu	278269	190500	51776	138724	405751	- 11242
Perlis	90885	47593	13038	34555	121062	- 4378
Total	6278758	3825017	852967	2967650	8791690	-454718

Source: Pryor, 1972:240.

Note: The total net migrants do not add up to zero because of net international out migration mainly to Singapore and China.

This is due to the fact that Pahang had large areas of land suitable for agricultural development.

During the period 1970-1980, some 1.1 million people moved between the 12 states in Peninsular Malaysia, according to information on place of last previous residence during 10 years preceding the 1980 census. The pattern of net migration seems to have been similar to that of 1957-1970, with net migration inflows to Selangor, Federal Territory and Pahang, stability in Penang, Terengganu, Perlis and Johor, and net outflow from Perak, Kedah, Melaka and Kelantan (Table 1-2). In terms of migration streams, Selangor was still receiving net migration from Perak, Negeri Sembilan, Melaka and Johor, while Pahang was receiving net migrants from Kelantan, Terengganu, Kedah and Perak. Net migration streams to Penang were from Perak and Kedah (Figure 1-1).

The pattern of inter-state migration by ethnic group is shown in Table 1-3. Of 198,000 net migrants (1970-1980) in the Federal Territory and Selangor, 57.7 per cent were Malays, 34 per cent Chinese and 13.3 per cent Indians. In Pahang about 85 per cent of net migrants were Malays, which reflects the selectivity of Malay migrants to the settlement schemes in the frontier region in that period.

Table 1-2: INTER-STATE MIGRATION IN PENINSULAR MALAYSIA 1970-1980

State	Number of Immigrants (Thousands)	Number of Outmigrants (Thousands)	Number of Net Migrants (Thousands)	Net Migration Rate (Per cent)
Selangor	236.8	108.2	128.6	9.5
Pahang	151.0	56.2	94.8	13.2
F.Territory	209.8	140.3	69.5	7.9
Pulau Pinang	72.4	69.8	2.6	0.3
Perak	89.1	193.5	-104.4	- 5.8
Kedah	51.6	109.9	- 58.3	- 5.3
Melaka	36.0	69.0	- 33.0	- 7.2
Kelantan	30.6	62.8	- 32.2	- 3.7
Negeri Sembilan	56.6	78.1	- 21.5	- 3.8
Johor	83.9	93.5	- 9.6	- 0.6
Terengganu	34.1	37.1	- 3.0	- 0.6
Perlis	14.1	14.2	- 0.1	- 0.1
P.Malaysia	1066.0	1032.6	33.4	0.8

Source: Malaysia, Department of Statistics, 1983(a):69.

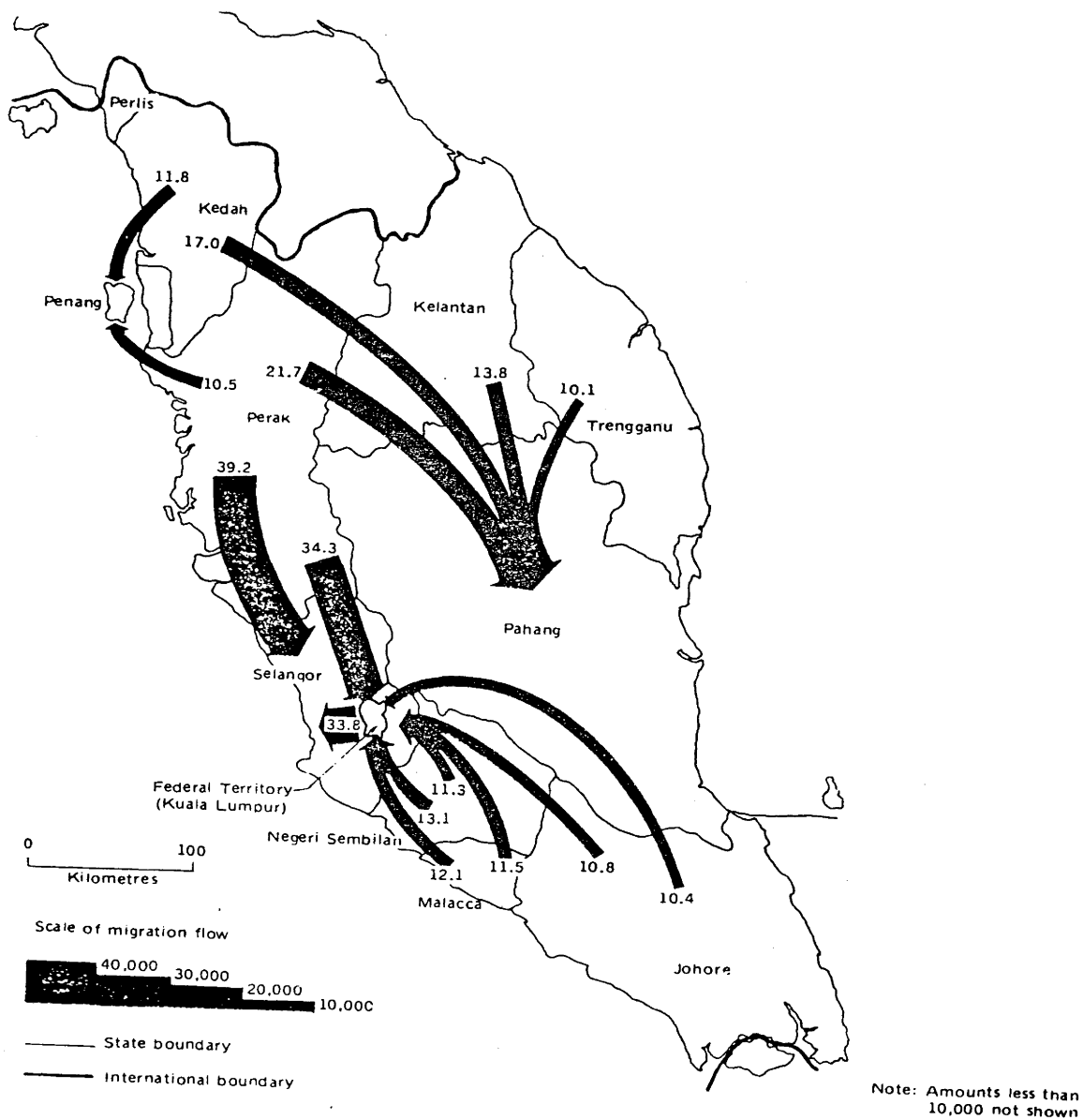
Note: The total number of out-migrants do not add up to 1066.0 because the information on the state of origin of out migrants from Peninsular Malaysia to Sabah and Sarawak was not known, hence the difference between in-migrants and out-migrants does not add to zero.

Table 1-3: INTER STATE NET MIGRATION BY ETHNIC GROUP, PENINSULAR
MALAYSIA 1970-1980

	Net Migrants (Thousands)			
	Malays	Chinese	Indians	Others
Selangor	72.3	43.0	12.2	1.1
Pahang	80.4	9.1	5.3	0.1
F.Territory	42.0	24.4	3.1	-0.1
Pulau Pinang	6.1	- 5.8	2.1	0.1
Perak	-46.0	-44.4	-14.2	0.2
Kedah	-41.8	- 9.2	- 7.0	-0.2
Melaka	-21.5	- 9.1	- 2.2	-0.1
Kelantan	-33.1	1.6	- 0.3	-0.3
Negeri Sembilan	- 9.5	-11.7	- 0.2	-0.1
Johor	-15.1	3.2	2.3	-
Terengganu	- 6.2	2.9	0.2	0.1
Perlis	- 0.3	- 0.1	0.3	-

Source: Malaysia, Department of Statistics, 1983(a):70.

Figure 1-1: NET MIGRATION STREAMS BETWEEN STATES, PENINSULAR MALAYSIA
1970-1980



Source: Malaysia, Department of Statistics, 1983(a):73

The relatively stable pattern of migration in the 1970-1980 period compared to the 1957-1970 period, with increasing numbers of migrants to Selangor (including the Federal Territory) and Pahang, may possibly be explained by the the following factors:

1. The growth of the Kelang Valley Region is continuing, especially in the manufacturing and service sectors. The annual average growth rates in GDP in the manufacturing and service sectors in the region during the period 1970-1980 were 12.8 per cent and 10.6 per cent respectively. The manufacturing and service sectors in the Kelang Valley Region share about 49.5 per cent and 48.0 per cent in the total manufacturing GDP and service GDP in Peninsular Malaysia respectively.

2. The concentration of agriculture-based development in Pahang, with the establishment of two Regional Development Authorities there, JENGKA and DARA, provide many employment opportunities which attract migrants to the regions.

The United Nation ESCAP Report (1982) indicates that intrasectoral movement (rural-to-rural or urban-to-urban) was more important than intersectoral movement (rural-to-urban or urban-to-rural) in Peninsular Malaysia in the 1957-1970 period. Administrative districts of previous residence were classified as urban or rural, with those districts with more than 25 per cent of their population living in localities (settlements) of 10,000 or more being classed as urban. Using this classification the proportions of moves in the 1957-1970 period in each sector were rural-to-rural 39.3 per cent; rural-to-urban 15.3 per cent; urban-to-rural 12.3 per cent; and urban-to-urban 33.1 per cent. Soon (1975) also observed a similar pattern of sectoral movement during the 1957-1970 intercensal period. She concluded that the pattern of migration which emerges is one of urban-to-urban or rural-to-rural movement, and rural-to-urban migration was less significant.

During 1970-1980, based on 1980 census data, rural-to-rural migration was still most important (44 per cent) with declining percentages of urban-to-urban migration (22 per cent). Only 16 per cent

was rural-to-urban migration (Table 1-4). Over 60 per cent of migration occurring in that period was to rural destinations. This reflects the significant influence of rural development in diverting migrants to rural areas, especially in Pahang.

Table 1-4: RURAL URBAN MIGRATION (DURING THE 10 YEARS PRECEDING THE 1980 CENSUS), PENINSULAR MALAYSIA

Area of Origin	Area of Destination			Per cent Distribution		
	Number (Thousands)					
	Urban	Rural	Total	Urban	Rural	Total
Urban	517.5	416.8	934.3	22	18	40
Rural	364.4	1004.7	1369.1	16	44	60
Total	881.9	1421.5	2303.4	38	62	100

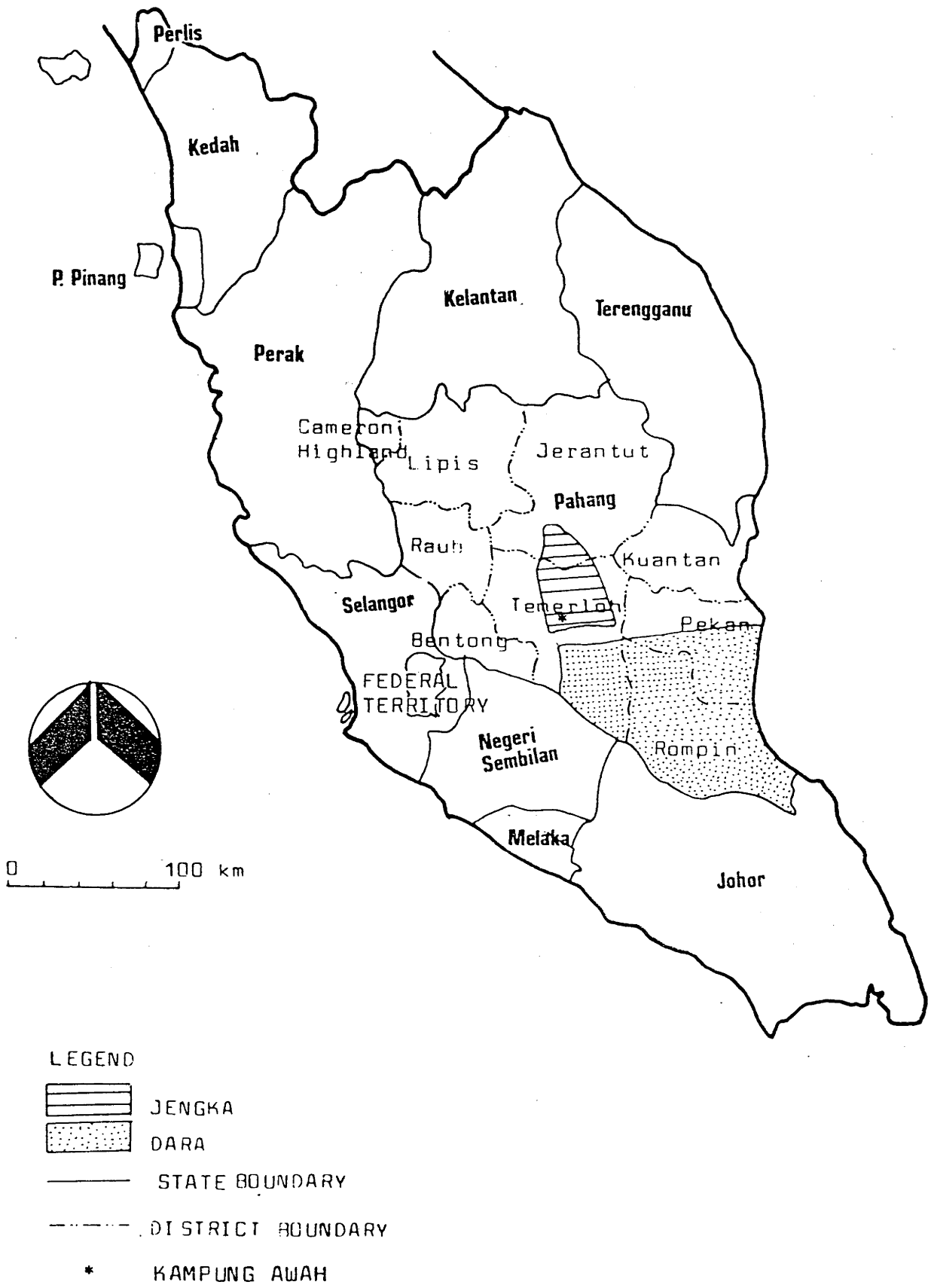
Source: Malaysia, Department of Statistics, 1983:78.

The following sections of this chapter will briefly described the study area, objectives and methodology of the study.

1.3 Study Area

Pahang is the largest state in Peninsular Malaysia with an area of 35,964 square kilometres, about 27 per cent of the total area of Peninsular Malaysia. The landscape consists of coastal plains in the east, varing to undulating and hilly terrain towards the Main Ranges in the Western part of the state. The population in 1970 was 504,900 and increased to 788,800 by 1980, or about 7 per cent of the total population of Peninsular Malaysia. Population density is around 83 persons per square kilometre, which is sparse compared to the states in the western region of Peninsular Malaysia. The regional setting of the study area is shown in Figure 1-2.

Figure 1-2: REGIONAL SETTING OF THE STUDY AREA



Pahang experienced a high rate of population growth of 4.3 per cent per annum in 1970-1980, compared to 2.2 per cent for Peninsular Malaysia. Part of this growth was due to in-migration from other states, a net inflow of 94,800, about 33 per cent of the state's annual population growth of 4.3 per cent. The growth of population by districts is shown in Table 1-5. The districts of Jerantut, Rompin, Kuantan and Temerloh had the highest rates of population growth, while Lipis and Raub experienced the lowest rates. The variation of growth is probably due to the imbalance of development activities between the districts. The frontier region development of JENGKA and DARA, located mainly in Rompin, Temerloh and Jerantut, and the development in Kuantan metropolitan region were the major causes of high population growth in those districts.

Table 1-5: POPULATION GROWTH BY DISTRICTS, PAHANG 1970-1980

Districts	Population 1970 (a)	Population 1980 (b)	Annual Growth Rate (%)
Bentong	56820	72865	2.5
Cameron Highland	16022	21502	3.0
Jerantut	36799	67675	6.3
Kuantan	96883	170573	5.8
Lipis	50811	56996	1.2
Pekan	48754	62246	2.5
Raub	57548	64414	1.1
Temerloh	119747	213355	5.9
Rompin	21516	38975	6.1
Pahang (total)	504900	768801	4.3

Source: a. Malaysia, Department of Statistics, 1973:71

b. Malaysia, Department of Statistics, 1983(b):19

1.4 Objective of the Study

This study presumes that the development of frontier regions has a significant impact on internal migration. Such development facilitates out-migration from existing rural areas by inducing a new type of migration of people who otherwise would remain in existing villages if there were no opportunities in frontier regions. With urban types of facilities available in frontier regions, urban oriented education and experience will, in the long term, encourage migration of the second and subsequent generations to the cities and serve as a stage in the process of chain migration.

The main objectives of the study are as follows:

1. To examine the pattern of migration in Pahang in relation to the development of two frontier regions, JENGKA and DARA.
2. To identify the characteristics of in-migrants in the settlement schemes in the frontier regions, in order to determine whether they were always potential migrants or migrants who would not have moved if there were no opportunities in the settlement schemes.
3. To identify the characteristics of out-migrants from the settlement schemes in the frontier region for the determination of potential future out-migration.
4. To examine whether the development in the frontier region will, in the long term, encourage migration to the cities.

1.5 Data Sources and Method of Analysis

Most of the data used in this study are from the Population Census of 1980, a sample survey of a settlement scheme undertaken by the author in 1986, the FELDA Settlers Census of 1976 and Reports of the Regional Development Authorities.

The data from the 1980 census provide basic information on the total population of each administrative district, some characteristics of the population and tabulations on previous place of residence by current place of residence for each district. The data have not been adjusted for under-enumeration estimated at about 4 per cent. The analysis of migrants based on previous place of residence does not refer to a particular time period, because there is no tabulation on duration of residence. The main problem of census data is that census regions seldom coincide with the boundaries of Regional Development Authorities. This is because the census regions were delineated according to administrative district boundaries which are not similar to the boundaries of Regional Development Authorities regions. Therefore a precise analysis of migration in frontier areas could not be made.

The main information on out-migration from the frontier areas is from a sample survey carried out in one of the settlement schemes (Kampung Awah) in JENGKA on 6-7 February 1986. Interviews were conducted in 111 households, about 33 per cent of the total of 334 households in the settlement. The head of the household or the eldest person present during the time of the survey was interviewed. Questions were asked on the present characteristics (such as age, sex, marital status and educational level) of the head of the household, other members present in the household, and all individuals who had migrated. Additional questions about those who had migrated were also asked, such as place of destination and year of migrating (Appendix A). The interviews were conducted by three research assistants under the supervision of the author. The main limitation of the survey is its reliance on the memory of the respondent for information about other persons, especially in regard to age, year when members of household migrated and employment of migrants. The problem is typical for 'proxy' respondents. During the survey an attempt was made to overcome these memory problems by relating incidents such as births or migration to certain well-known events in the country.

The information about the characteristics of migrants to frontier areas (such as age, sex, family size, educational attainment, occupation

and incomes before entering FELDA schemes) was obtained from the FELDA settlers Census of 1976. A copy of relevant schedule used in this census is in Appendix B. This census covered all settlements in the study area developed prior to that time. One problem with these data was that the age groupings are not of equal intervals, the first age group being 0-5 (6 years) and the rest 5 years, 6-10, 11-15, 16-20, and so on, with the last being 56 and over. In this study the age grouping was adjusted to standard 5 year age groups of 0-4, 5-9, 10-14....55+. The first age group was adjusted by removing the estimated proportion of children aged 5 years from the first age group and the other groups were adjusted using Sprague multipliers. Other information was obtained from unpublished reports of the Regional Development Authorities, and traditional village studies in JENGKA and DARA done in the early 1980s.

The survey data were coded and then analysed using the SPSS computer program. In addition, migration streams were estimated from a matrix table on place of previous residence and current place of residence by districts from published documents of the 1980 census (Appendix C).

1.6 Definition of Terms

Aboriginal Population. According to Groves (1964:5), these are the indigenous people of West Malaysia who are primarily forest dwellers with primitive culture. Increasingly the government is extending medical and educational facilities to them. Those who adopt the Malay language and Islamic religion tend to become absorbed into the Malay community.

Jengka. This term usually refers to the region covered by The Jengka Development Corporation or The Development Authority of Jengka Region (LKWJ) (see figure 3-1). In Malaysia, the term usually is written in upper-case letters, and this practice is followed in this study.

Induced Migrants. This group covers persons who would not have moved if there had been no opportunities in the settlement schemes. These people were those who had been targeted as being likely to benefit from development projects in frontier areas.

Intra-State Migrants. This group includes persons whose last previous residence was in a different district in Pahang from the district in which they were enumerated at the time of the census.

Inter-State Migrants. This group includes persons whose last previous residence was in a different state in Peninsular Malaysia from the state in which they were enumerated at the time of the census.

Non-Migrants. This group includes persons whose residence had not changed from the reference period to the census.

Out-Migrants from the Settlement Scheme. This group includes those who were previously residing inside the settlement scheme but who were residing outside the settlement scheme at the time of the survey.

Potential Migrants. This term refers to those with an intention to move within two years.

Resource Frontier Region. A zone of new settlement in an otherwise virgin or sparsely settled territory (Johari, 1983). JENGKA and DARA regions are examples of such regions which involve large-scale investment in agricultural development, forestry, infrastructure and housing.

Regional Development. This is an activity of the government which involves one or more of the following objectives, as stated by Johari (1983:22):

- a. An increase in national production, income, and employment.
- b. Evolution of an improved pattern of rural and urban human settlement and production activities.
- c. Differential improvement in a region's level of living compared to the rest of the nation, so as to promote equalization of income and opportunity.
- d. Integration of a region into the national culture.
- e. Advancement of the social development of a region.
- f. Evolution of an improved organizational and administrative form for carrying out economic and social development objectives.

CHAPTER 2

MIGRATION AND RURAL DEVELOPMENT: CONCEPTUAL APPROACH AND EMPIRICAL FINDINGS

2.1 Introduction

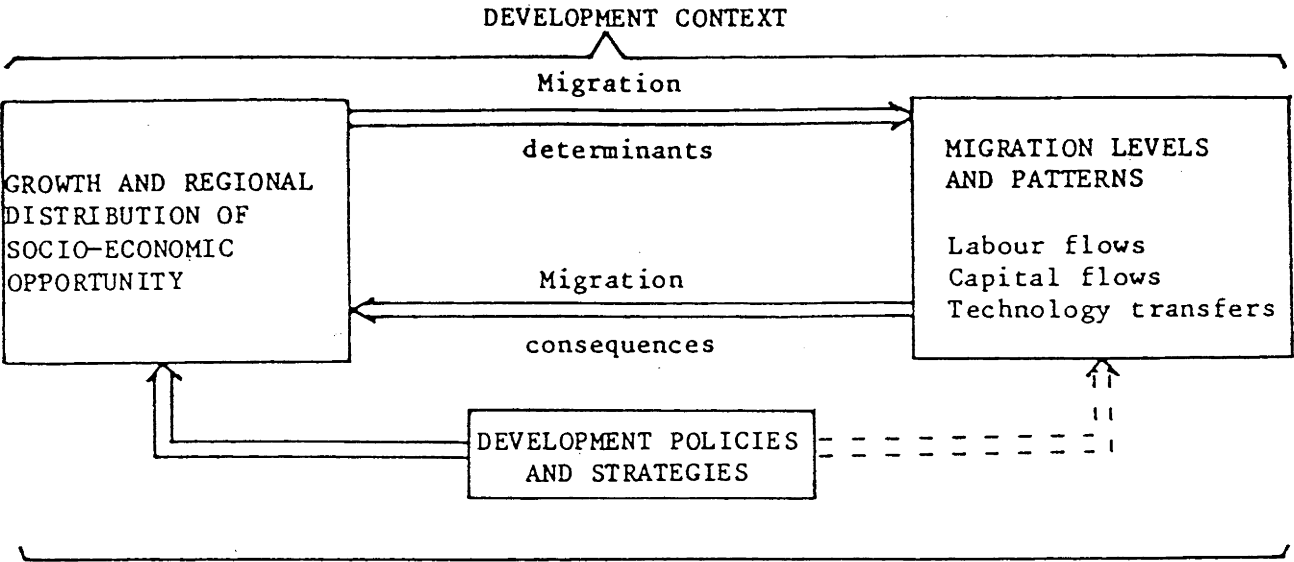
This chapter will discuss the conceptual approaches and empirical findings of studies on the relationship of migration and rural development. This review will provide a general guideline to explain the relationship of migration and rural development and a framework for the study. The review of empirical findings will concentrate on Southeast Asian countries, since they are more relevant to this study.

2.2 Conceptual Approach to Migration and Rural Development

Simmons (1984), in an analysis of migration and rural development, outlined the basic framework of the inter-relationship of these two factors. As shown in Figure 2-1, he assumed that migration and socio-economic change interact with each other and therefore migration is considered to be an integral part of social and economic change. Migration and development have a causal relationship which it is both determined by and has consequences for the growth and spatial distribution of social and economic opportunities. These interactions occur in development contexts which differ from each other. In his framework the national development policies are generally oriented towards socio-economic opportunities and therefore influence migration indirectly. Only in some cases has the government sought to control migration directly.

Simmons also emphasised that the understanding of the development context is very important in the study of migration and rural development. There are four models of development context identified by Simmons which appear to be relevant to the migration and rural development inter-relationship:

Figure 2-1: A FRAMEWORK FOR THE ANALYSIS OF
MIGRATION AND DEVELOPMENT



Source: Simmons, Alan B., 1984:157

1. Neo-Classical Model. This model is more relevant to developed countries. It emphasises the positive development role of rural-to-urban migration. The surplus labour force in rural areas is absorbed in urban industries and at the same time agriculture becomes increasingly mechanised and displaces labour in rural areas. As a result, overall national economic efficiency increases. In this model migration is predominately of a family type, permanent and directed toward urban areas.

2. Labour-surplus Model. This model is more relevant in developing countries which have experienced rapid population growth. Urban industries, which in general are capital intensive, are not able to absorb surplus workers and at the same time, the mechanisation of agriculture in rural areas has displaced labour. As the result there are surpluses of labour both in rural and urban areas. Circulation and return migration are common in this model.

3. Plantation Model. This is a sub-model of the labour-surplus approach in which the key element of economic change is rural plantation agriculture, forestry and mining rather than urban industries. The location of these resources is at a distance from the available labour pool and the demand for labour is seasonal or subject to short-term fluctuations related to the demand for raw materials in the industrial countries. Migration in this context is not permanent and normally migrants return to their home families during the low labour demand period.

4. Rural Development Model. This model relates to the situation in which government has sought to overcome 'urban bias' by various rural development efforts, such as land redistribution, farm credit and improved social services in rural areas. To some extent it reduces out-migration from rural areas, especially in cases where rural development leads to increases in rural income.

However, the models above are considered to be very general and only cover certain contexts and tend to stress only a particular

dominant migration pattern and associated structures of migration determinants and consequences. Another approach to conceptualising internal migration in relation to development is summarised by Pryor (1979:7-8) :

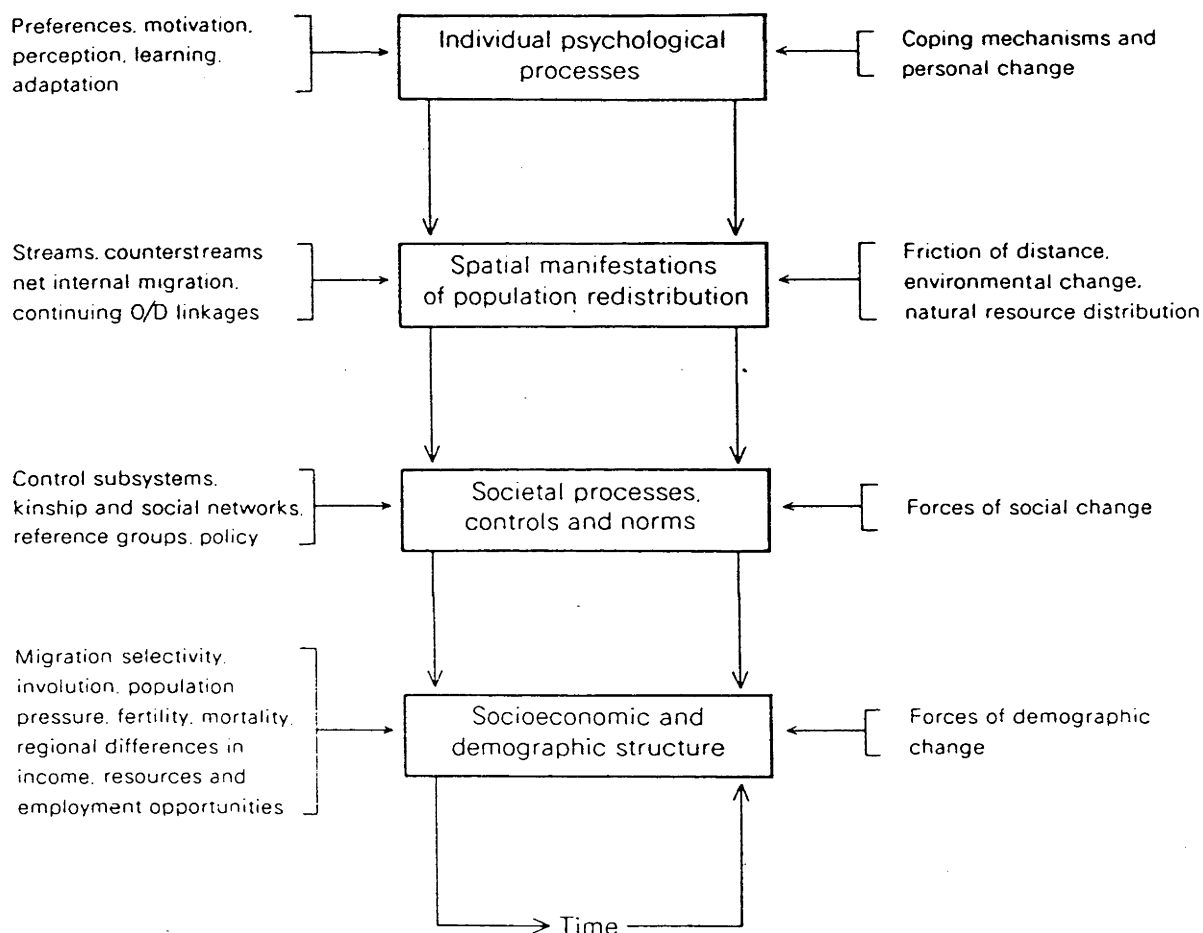
"The spatial or regional manifestation of population redistribution-migration streams, counter streams, net population shifts, continuing origin-destination linkages-are integrally bound up with individual psychological processes, controls and norms; and socio-economic and demographic structure; and the whole 'mix' changes through time and varies across space at a point in time."

As indicated in Figure 2-2, there are many other factors which influence each of these processes which form a very complex and volatile interaction. The interaction of those behavioural and structural settings (the processes), in the context of the present 'transitional stage' of economic development and social change, produces various patterns of internal migration as conceptualised in Figure 2-3 (Pryor,1979). In the figure there are three typical regions, the economic core metropolitan region, the economic periphery or traditional rural peasant sector and the intermediate region which has potential as a growth centre. The main pattern of migration streams are intra-rural migration (within the traditional peasant sector of the periphery), rural-to-urban migration (from the traditional sector of the periphery to the traditional sector of the town and metropolitan region), rural-to-rural migration (from the traditional to the modern/capitalist sector of the periphery) and circular mobility (short term-oscillation within the traditional sector).

In relation to the transitional stage of development and migration flows above, there are two types of migration characteristics which can be distinguished: conservative and innovative. Peterson (cited in Pryor, 1972:64) described it as:

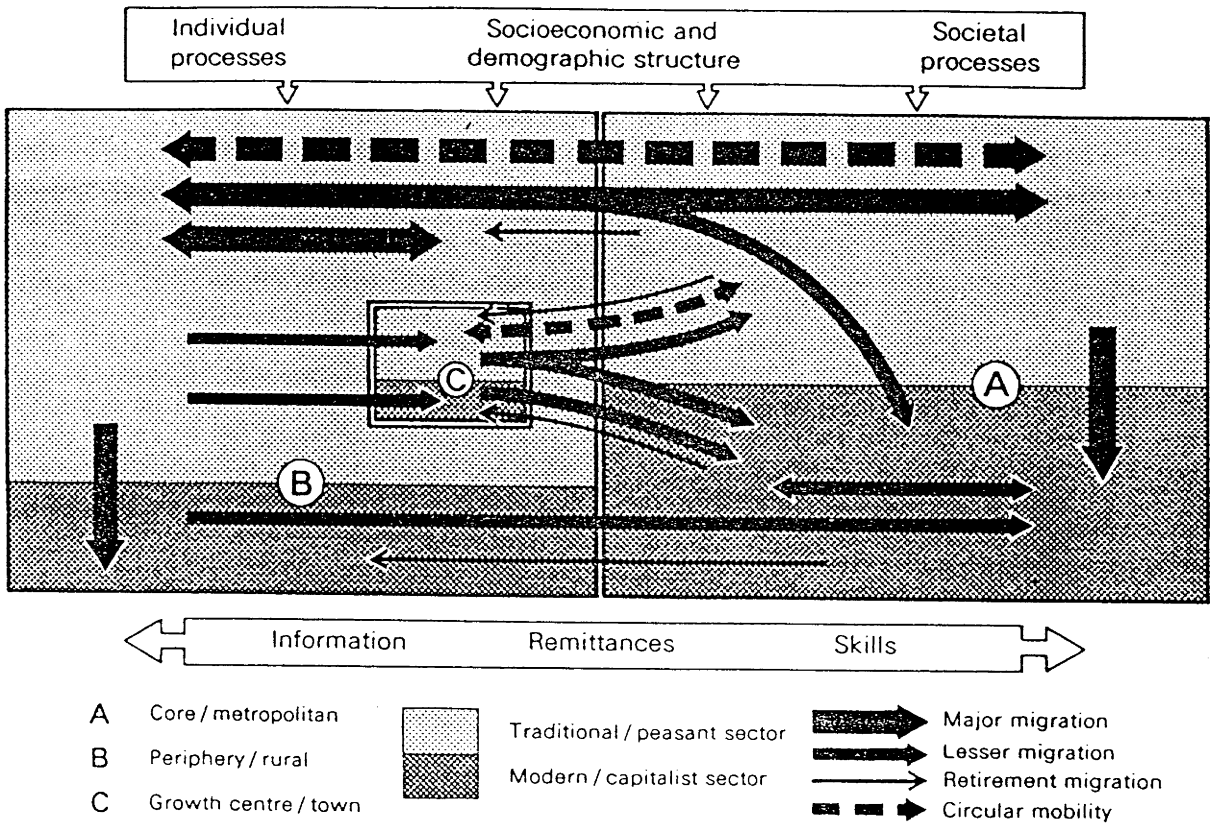
"Some persons migrate as a means of achieving the new. Let us term such migration innovating. Others migrate in response to a change in conditions, in order to retain what they had; they move geographically in order to remain where they are

Figure 2-2: THE BEHAVIOURAL AND STRUCTURAL SETTING OF POPULATION REDISTRIBUTION



Source: Pryor, 1979:6

Figure 2-3: THE SPATIAL MANIFESTATIONS OF POPULATION REDISTRIBUTION DURING THE 'TRANSITIONAL' STAGE OF ECONOMIC DEVELOPMENT AND SOCIAL CHANGE



Source: Pryor, 1979:8

in all other respects. Let us term such migration conservative."

The division of flow according to these characteristics is summarised as follows:

1. Innovative migration as spatial mobility involving mobility from
 - a. the periphery to the centre, and/or from
 - b. the traditional sector to the modern sector.
2. Conservative migration is that spatial mobility involving mobility within;
 - a. the centre, or within
 - b. the periphery and/or within
 - c. the modern sector, or within
 - d. the traditional sector.

It also includes movement from

- e. the centre to the periphery, and/or from
- f. the modern sector to the traditional sector.

In other words, innovative migration implies movement to a higher spatial status (more industrial, more modern) and conservative migration involves movement within one's present space or to a lower spatial status (less industrial, less modern) (Pryor, 1972:65-66).

Generally the theory above provides some insight into the paradigms which describes the complex causal relationship between migration and rural development. It is clear that the relationship between migration and rural development will rely upon the development context. Each development context which results from the complex interaction of a behavioural and structural setting will produce different migration patterns, which in turn reflect the causal relationship of migration and rural development. The review of empirical findings in the succeeding section will focus on the causal relationship of migration and rural development.

2.3 Migration and Rural Development in Southeast Asian Countries

Generally there are two types of rural development programs: in situ rural development, and resettlement programs. The former refers to measures to improve the productivity of existing villages. Such measures include the so-called "Green Revolution" program, irrigation, agricultural development and integrated rural development. It includes policies of keeping people in rural areas (Paiva, 1984). Integrated rural development covers a wide range of activities for betterment of rural livelihood, such as measures to increase production, and to provide physical infrastructure and social facilities. The latter type of program involves the opening up of new land for cultivation, together with settlement. Programs are known by different names in different countries: in the Philippines they are termed "resettlement", "land colonisation", and "new settlement"; in Malaysia, "land settlement" or "land development"; in Indonesia "land colonisation" or "transmigration schemes"; and in Thailand they are normally known as "cooperative land settlement" or "self-help resettlement" (Bahrin, 1984). Migration here generally means the movement of people in or out of local communities either permanently or temporarily.

The following discussion on the causal relationship of migration and rural development will be concerned with both how migration affects rural development projects and how rural development projects affect migration. The latter is the main focus of this study, while the former is an important and complementary aspect of the topics under consideration, but one which cannot be fully explored here.

2.3.1 The Consequences of Migration for Rural Development

The consequences of migration for rural development vary from place to place, depending on the development context (Simmons, 1984). The quality and quantity of migrants, the time dimension of their absence from the place of origin, the experience and nature of activities at the destination, and the remittances sent home determine the extent of the impact on rural development. This discussion will cover the consequences of migration for the rural labour force and agricultural production, remittances and rural income, and rural technology and innovation.

The Consequences of Migration for the Rural Labour Force and Agricultural Production

Some studies of migration and rural development in Southeast Asia indicate that there is a shortage of labour in the rural agricultural sector, due to rural out-migration (Jones and Ward, 1981; Maude, 1981; Carino, 1979; Mohd Nor, 1979; Cheang and Lim, 1982). Other studies have found that there is no shortage of labour because many migrants come back during the peak agricultural activity season (Corner, 1981; Hugo, 1979; Piampiti, 1984). Due to the nature of agricultural activities which require more labour input during certain periods, especially during planting and harvesting, an acute shortage of labour occurs seasonally (Jones and Ward, 1981). The extent of the seasonal shortage varies from place to place depending on the efficiency of mechanisms for bringing back migrants and obtaining seasonally needed wage labour.

In Java, most non-permanent migrants (circular migrants) and some permanent migrants return to their village of origin during the peak periods of labour requirement (Hugo, 1979). The circular migrants who do not return are long-distance migrants who work on plantations or mineral development projects on a contract basis, which involves absences of up to two years (Hugo, 1982). The same thing also occurs in Kedah (a state in Peninsular Malaysia) where some individual migrants, who move on a less permanent basis, regularly return during the peak season of agricultural activity (Corner, 1981). Although most of the temporary migrants return during peak periods of labour requirement, there are indications that labour shortages still occur. The introduction of machines in Kedah (Maude, 1981) and padi tractors in some parts of Java and Bali (Jones and Ward, 1981) suggests that there are shortages of agricultural labour in the areas concerned. Nevertheless, machines may be adopted to increase output or for saving time rather than to compensate for labour shortages. The recent trend is for young men and women who have better education opportunities to be longer willing to work as agricultural labourers (Corner, 1981; Mohd Nor, 1979; Jones and Ward, 1981). In fact, women are also becoming more involved in rural to urban migration in Southeast Asian countries (Khoo, et al., 1984).

In Thailand, the problems of labour shortages are quite different. There are seasonal labour shortages in multiple cropping areas, but normally these have been overcome by a sufficient pool of potential workers existing in other regions, especially the mono-cropping areas (Jones and Ward, 1981). According to Piampita (1984), there is a high rate of unemployment and under-employment among the economically active farm population in the country, and rural out-migration would be unlikely to cause labour shortages in Thailand. The out-migration from the Bicol Region in the Philippines, which is heavily agriculture-based, faces some problems of labour shortage (Carino, 1979).

There is not much information on the extent to which out-migration influences agricultural production. In a study of villages in Java, Hugo (1979) found no evidence of labour shortages causing any significant reduction in local agricultural productivity. In fact, out-migration reduced pressure on limited job opportunities in villages during the slack seasons. An Indonesian newspaper report in 1977 (cited in Jones and Ward, 1981) claimed that 700,000 ha of "sawah" (paddy field) in West Java had gone uncultivated because of a labour shortage. In Malaysia, about 0.8 million hectares of agricultural land have been abandoned due to labour shortages which has jeopardised the target of achieving self sufficiency in rice (Mohd Nor, 1979; Cheong and Lim, 1982). However, there is no conclusive evidence on the effect of migration per se on agricultural production in Southeast Asian Countries.

The Impact of Migration on Rural Income

There is a two-way flow of money between migrants and their families at home. According to Hugo (cited in Simmons, 1984:173),

- "the amount of transfer in each direction depends on:
- a. The amount of money available to the migrant;
 - b. The commitment felt by the migrant to those left behind or, alternatively, the amount of control which non-migrants exert over migrants;
 - c. The level of need of the migrant's village kinsmen."

A study of West Java villages by Hugo (1982) showed that most of the temporary migrants remitted money to their families and 81 per cent

brought back goods. The contribution made by remittances to household income was found to be significant, as about half of the income in migrants' households came from the migrants. Hugo also found that net remittances from non-permanent migrants is greater than from permanent migrants.

Studies in Kedah (Corner, 1981) and Kelantan (Maude, 1981) in Malaysia, indicated that the contribution made by remittances was significant only for poor households while for others it was merely supplementary. The effect on relative income distribution between households was small and net benefits to the rural economy as a whole were not significant. However both studies suffered from unreliability of data. Income received from remittances was only given as a rough approximation, and most of the respondents did not have accurate knowledge of the amounts involved. Furthermore, these studies do not necessarily reflect the situation in other parts of the country.

In Java, the effect of remittances on villages as a whole was apparent (Hugo, 1979). They create a greater demand for goods and services, and more demands on craftsmen to build stone-walled houses. The greater contribution of remittances in the Java case may have been due to the fact that most of the Javan households were poor, relying heavily on outside income for a living. Income from migration was primarily used for daily expenses. Other expenditure was for education, renovation of houses and agricultural input (Hugo, 1979; Maude, 1981; Corner, 1981). Thus most of the income gained through migration was spent on consumption rather than investment.

The Impact of Migration on Rural Technology and Innovation

There are two different conclusions regarding the impact of migration on rural technology and innovation. First, migration is said to make a significant contribution to rural technology, while secondly, it is claimed there is no appreciable contribution at all (Simmons, 1984). The latter view seems to be more frequently supported.

In Java, migration does not seem to stimulate farming innovation but it contributes more towards encouraging trading, diversification of products and expansion of transport (Hugo, cited in Simmons, 1984). In Kelantan, the return migrants from Singapore bring with them construction skills which are not applicable to their home villages (Maude, 1981), but there is some indication that the money received from migrants is used for modern farming practices such as buying fertilizer and hiring tractors.

In Kedah, machines have been used to overcome shortages of labour, and these can be seen as an indirect impact of out-migration on innovations in farming technology (Corner, 1981). On the other hand Mohd Nor (1979), pointed out that the old and less energetic labourers left behind in villages are less capable of adopting new agricultural technology. The lack of leadership among young adults in Java will slow down the process of modernisation (Simmons, 1984). Generally it can be seen that migration has mixed implications for rural technology and innovation.

2.3.2 The Impact of Rural Development Projects on Migration

The following discussion of the impact of rural development projects on migration is divided into two parts; the impact of in situ rural development and the impact of land settlement programs. This is because the nature of these two programs is quite different. The former normally seeks to encourage people to stay in rural areas, while the latter diverts migrants to frontier areas. Both programs have the implicit aim of slowing rural to urban migration.

In Situ Rural Development Programs

There is a wide range of activities covered under in situ rural development programs. They include capital intensive measures such as providing irrigation, farm machinery and high yielding crop varieties, the introduction of labour intensive techniques and the provision of infrastructure and services (Kols, 1983). Depending on the nature of development activities, the impact of the programs may slow rural out-migration, accelerate out-migration or have mixed effects. The

implications of the programs in the short and long term are also not the same (Rhoda, 1983).

According to Findley (1981), capital intensive rural development programs such as mechanisation and use of modern agricultural techniques often result in greater agricultural output and productivity, but they only benefit large landowners, while small farmers and the landless are left behind. These programs result in increases in rural disparities and increased rural out-migration. On the other hand, integrated rural development programs which emphasise a more equitable distribution of income and employment will give better options to migrants and reduce out-migration. Such programs include land reform, supervised credit for small farmers, labour intensive agricultural innovation, provision of physical infrastructure, marketing facilities and rural vocational training.

Hayami and Kikuchi (1983) found that the introduction of new rice technology in the lowlands of the province of Laguna in the Philippines increased the demand for labour, especially for weeding and pest control. It also induced immigration from upland areas which do not have the new rice technology. However, only landless farmers were attracted, while farmers' children with better education migrated out to seek urban occupations.

Cooperative farming programs in the Philippines have been reported to be successful, increasing cereal crop production and creating more than 300,000 jobs. These programs are also able to attract migrants from other areas (Aquino, 1984). Nevertheless, the extent to which they influence rural to urban migration is uncertain. Among a sample of 231 participants in the programs, about 44 per cent were unemployed before joining the programs, while the others were mostly farmers. Normally, potential migrants who have lower qualifications (the less educated and landless, and poor farmers) were attracted to rural development programs (Findley, 1981). It was also uncertain whether such programs could effectively retain the workers. Only about half of the participants perceived their standard of living as having improved since joining the programs. The majority of these could be those previously unemployed.

In Thailand, a macro study by Piampati (1984) showed that the impact of rural development on farmers' incomes was not significant. In 1979, the average income of Thai farmers was less than half the national average. There are 14 million hectares of agricultural land without irrigation and thus without year-round crops to ensure security of employment in rural areas. The average rate of labour utilisation is only 38 per cent of the total labour force in agriculture. It is also estimated that in 1973, 62 per cent of the economically active farm population in the country was unemployed or under-employed. It is therefore likely that rural development programs in Thailand are incapable of reducing rural to urban migration.

In Malaysia, in situ development programs mostly stress capital-intensive elements of raising productivity and output (Cheong and Lim, 1982). They are essentially nonemployment-generating and less effective in overcoming out-migration.

Generally, rural development programs have a poor record in slowing rural to urban migration. In some cases they may even promote rather than discourage migration (Kols, 1983). Paiva (1984) suggests that, in order to encourage people to stay in rural areas, five conditions need to be emphasised:

1. Increased agricultural production to provide employment security.
2. Equity conditions (that is, reduced economic disparity).
3. Proper methods of administrative implementation to ensure the quality and quantity of services in rural areas.
4. Social integration through participation in the life of the local community and through a variety of social and economic activities.
5. The integration of the above elements in rural development programs.

The Effect of Land Settlement Schemes

The officially sponsored land settlement schemes can be divided into four main categories:

1. Spontaneous, with government supplying land only.
2. Spontaneous, with government supplying land and other services.
3. Sponsored migration into planned settlements.
4. Settlements created by compulsory relocation.

Type 3 is most common one in Southeast Asian countries. There are few type 4 schemes and several type 1 and 2, created particularly in Indonesia during the colonial period (MacAndrews, 1982). The main objectives of land settlement schemes are the distribution of land to the needy, economic upgrading and population redistribution (Bahrin, 1984).

Many studies point out that the impact of land settlement programs on migration is marginal (Jones, 1979; Wijst, 1985; Chirapanda, 1982; Gosling, 1985; Bahrin, 1984; Oberai, 1981).

In Indonesia, during the entire period 1905 to 1941 only about 210,000 people were moved through settlement schemes. This amounted to about 1 per cent of the population growth in Java during that period (Oey, 1982). Since independence the scheme, known as the transmigration program, has continued, but is far from achieving its ambitious target of moving people out of Java. During the period 1950-1968 less than 10 per cent of the target was achieved. In REPELITA I, very low targets were set and the program over-achieved. In REPELITA II and REPELITA III very ambitious targets of a quarter of a million families and a half a million families respectively were set. Less than 25 per cent of the target in REPELITA II was achieved, with slow progress in REPELITA III. This poor performance was attributed to poor planning and the small financial allocations made to carry out the programs (Bahrin, 1984). Wijst (1985) concluded that transmigration has hardly influenced Indonesian's population distribution, and only in specific receiving areas have the effects of transmigration been significant. But if the natural increase of migrants' families since they moved is taken into account, transmigration can be considered to have reduced the extent of the increase in Java's population (Jones, 1979).

In terms of quality of life, transmigration programs fail to improve the life of the migrants. The differences in income before and after migration is marginal (Oey, 1982). In fact, many migrants suffer a hard life. In many settlements productivity is low, there is inadequate infrastructure, transportation problems for marketing abound, and there is a lack of social facilities (Sediono, 1982; Guinness, 1982).

Although land settlement programs seem to be successful in Malaysia in terms of increased rural production and rural income, settler intake is, however, low and inconsistent (Bahrin, 1984). The Federal Land Development Authority (FELDA), the main agency which undertakes land settlements schemes, achieved only a very poor performance during the early period of its establishment in the 1960s. By 1964, FELDA was only able to employ 2,043 families per year compared to the target of 4,800 families per year. During the Second Malaysian Plan (1971-75), the number of families already settled was 13,779 out of 20,000 families targeted. By mid 1982, the total number of families already settled was around 72,000. The number of people settled is rather small compared to the number of internal migrants. In the 1957-70 period, only about 6.2 per cent of 2.4 million internal migrants were considered to be FELDA induced movers (Khoo, 1984).

Chan's study of settlers' characteristics (cited in Gosling, 1985) suggests that FELDA settlers were not actually potential migrants. They were not the poorest among the poor, very few were unemployed prior to coming to FELDA schemes, and the mean age of settlers selected in the 1960s was 35-36, which is not the typical age of migrants. The majority come to FELDA schemes because of the 'pull' factors of getting land ownership, rather than rural 'push' factors. Based on an analysis of the number and characteristics of settlers and potential migrants, Gosling (1985) suggests that the achievement of the FELDA schemes in diverting rural-urban migration has been very limited. Rather, FELDA schemes create a new group of migrants who otherwise would not migrate without FELDA's assistance. On the other hand, the design characteristics of FELDA schemes preclude the accommodation of second and subsequent generation settlers. The better opportunities for education available to

settlers' children, which suit urban employment, will probably facilitate further out-migration to urban areas in the future.

In the Philippines, land settlement programs began when the National Land Settlement Administration (NLSA) was established in June 1939. NLSA managed to resettle about 8,300 farming families, until it was replaced by the Land Settlement and Development Corporation (LASEDECO) in 1950. LASEDECO only resettled 1530 families (Postrado, 1984). The body in charge of settlement programs always changed with changes of government. It was during the Magsaysay government in 1955 that more people were resettled, under the National Rehabilitation and Resettlement Administration (NARRA) which took over the function of LASEDECO. NARRA resettled about 30,460 families. Under the Marcos regime the policy of land settlement has continued and by 1984 about 50,000 families were resettled. It is obvious that the number is very low compared to the period when it began. According to Crystal (1982) there are other, non-official land settlement schemes in the Philippines, which are promoted by the government, and also many spontaneous settlements which are greater in number than sponsored settlement schemes. However, there are no figures available on the number of settlers.

In the case of Thailand, the first land settlement schemes started in 1935 (Chirapanda, 1982). Under various government settlement programs, the number of families resettled is greater than in Malaysia and the Philippines (Bahrin, 1984). Up to 1977, 188,500 families had been resettled, the majority under self-help settlement schemes. Chirapanda (1982) estimated that by the end of 1979, about 1.2 million had been involved in land settlement programs. However, the figure might not be accurate since many of the settlers have left the schemes. Piampita (1984) noted that to a certain extent land settlement in Thailand has been successful in improving the life of the people who are involved in the programs. However, the programs seem to attract only certain groups of migrants who may not be the most significant groups that need help.

Generally, the effect of land settlement programs on migration is not significant since the number resettled is far smaller than the total number of migrants throughout these countries. It has also been observed that the record of sponsored land settlement is generally mixed, with failures outnumbering successes (Bahrin, 1981).

2.4 Conclusion

The conceptual approach discussed above provides a pattern or structure for understanding the complex interaction of migration and rural development. It is obvious that there is no simple generalisation that could be made on the causal relationship between migration and rural development, as it differs from one development context to another. This review of empirical studies has examined these causal relationships. The first part covered the impact of migration on rural development, and revealed that there is some impact from migration on the labour force and rural income but no significant impact on agricultural production and rural technological innovation. The impact seems to vary from place to place and certain groups of people in rural areas tend to be more affected. Some studies may be based on unreliable data or be too localised, to be applicable even to other parts of the same country.

The second part of the review of empirical findings has dealt with the impact of rural development programs on migration. The in situ development programs are only able to cater for certain groups of people, especially those who are not likely to migrate to urban areas. They have little success in reducing rural to urban migration. The land development programs have been proved to be very marginal in channelling migration away from urban areas or in reducing population pressures in rural areas. They also tend to induce new types of migrants who may not move from villages without opportunities in settlement schemes.

In Peninsular Malaysia, although the number of induced migrants due to land settlement schemes is small compared to the number of migrants in the country as a whole, the massive land development schemes (JENGKA and DARA) seem to be important factors which influence migration streams

to the state of Pahang. The implication of the massive land development schemes in JENGKA and DARA on migration will be discussed in detail in chapter three.

CHAPTER 3

REGIONAL DEVELOPMENT AND MIGRATION IN PAHANG

3.1 Introduction

This chapter will analyse the implications of regional development for internal migration in Pahang. The first part will describe and discuss development in JENGKA and DARA, and the second part will examine the pattern of internal migration in Pahang. The information on development is mainly drawn from unpublished reports of JENGKA and DARA, and the second section from published reports of the population census of Malaysia 1980.

3.2 Development in JENGKA

JENGKA is the name of a resource frontier region in Pahang. The region is roughly triangular in shape due to certain topographical features--the hills to the east and Sungai Pahang to the west, both of which form effective barriers to movement,--and also to existing road patterns which join the towns of Jerantut, Temerloh, Mentakab and Maran (Johari, 1983). The region mainly covers the districts of Temerloh and Jerantut. In 1980s, a new district of Maran was formed and it is also included in the JENGKA region.

The region was at first administered by Jengka Development corporation which was established in 1970 under the State of Pahang Enactment 10/71. It covers an area of approximately 121,000 hectares. Most of the area consists of undulating land lying between 30 to 90 meters in altitude, about 80 per cent of which is suitable for agriculture and forestry (Figure 3-1).

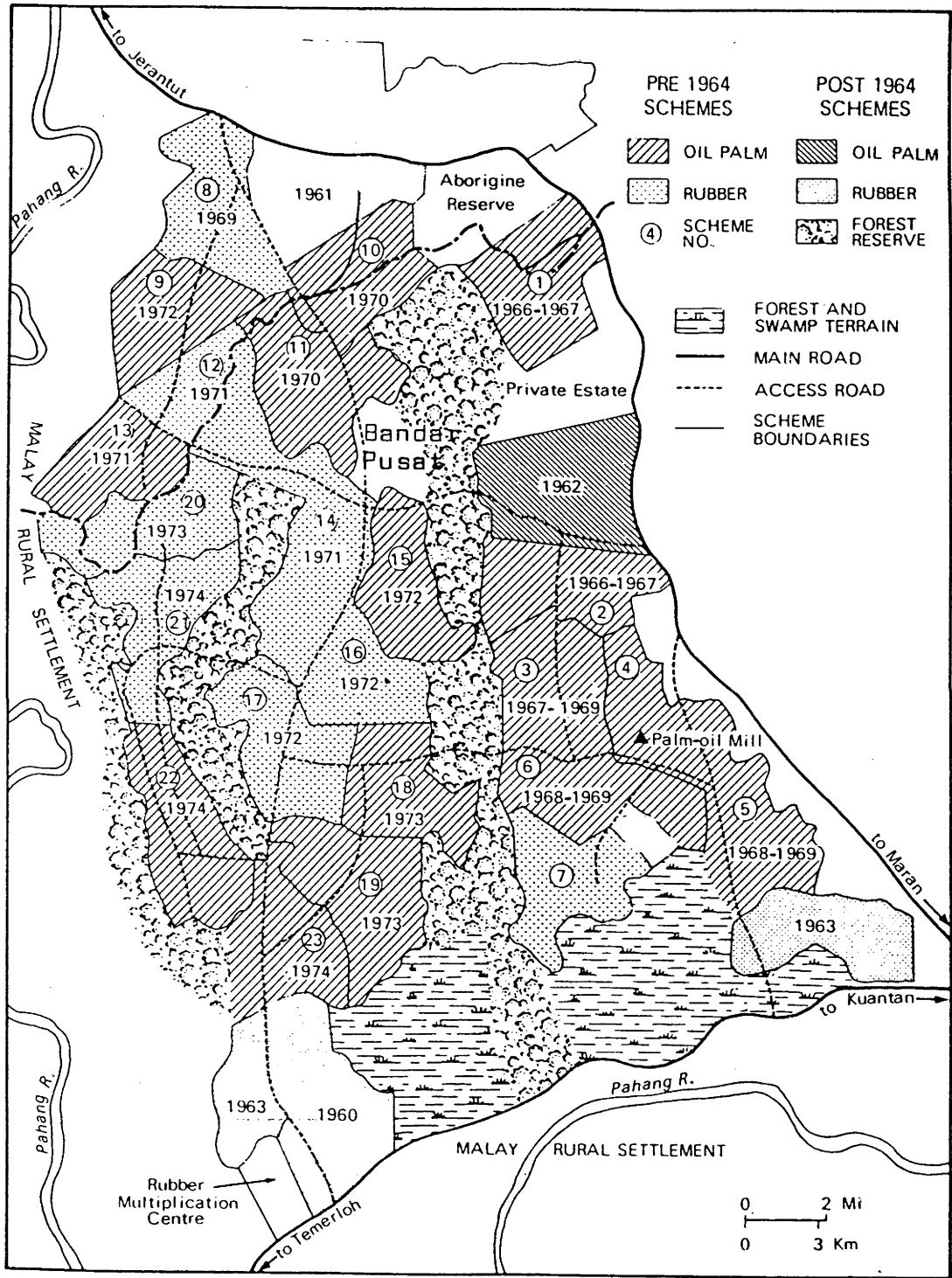
In August 1983 the corporation was converted to the Development Authority of Jengka Region (LKWJ) under Act 285 (Act of Parliament). The

reasons for the change in status of the corporation are mainly related to financial problems, shortages of staff and for administrative efficiency. The main source of finance for the corporation, which is responsible to develop Bandar Pusat, is the Pahang state government. The state government has found difficulties in financing the corporation successfully, possibly because the returns from the corporation are very marginal or negative. Compared to other regional organisations such as DARA, KEJORA, and KETENGAH, it is evident that the corporation has been "underfunded" in which the funds allocated were sufficient only for operating costs and very little was available for development projects (Johari, 1983:148-149). This is due to the fact that the state government has other priorities such as opening up new land for industrial areas in other districts and therefore only small amount allocations have been reserved for the corporation. The shortage of staff, particularly professionals and technicians, is another problem faced by the corporation. There had been continuing vacancies for these positions and among the employed staff the turnover is high. This is because the corporation is a small organisation, there are no incentives for the staff and the location of JENGKA is quite isolated. These problems resulted in less efficiency and poor performance of the corporation. Under the new organisation (LKWJ), funding is allocated by the federal government and is incorporated under the allocation of the national development plan, and the staff from the federal government can be seconded to LKWJ. Similar to other regional organisations which were given responsibility to develop traditional villages in their regions, the area under LKWJ was extended to 182,000 hectares, to include existing traditional villages.

The development of agriculture in JENGKA was mainly undertaken by the Federal Land Development Authority (FELDA). Some 80,722 hectares of land had been developed by FELDA by 1985 in 37 settlement schemes. It involved the movement of 14,923 settlers into the schemes in JENGKA (LKWJ, 1985a). The main crops are oil palm and rubber.

There is only one town established in JENGKA which functions as a regional service centre. This town, Bandar Pusat, was at first planned

Figure 3-1: MAJOR LAND USE OF JENGKA REGION



Source: Wikkramatileke, cited in Aiken, et. al., 1982:139
(The proposed land use adopted in the development of JENGKA region prior to the establishment of LKWJ)

for 50,000 people by 1990. However the revised target was only around 15,000 by the year 2000 (LKWJ, 1983). The former target could not be achieved due to the slow growth of the non-agricultural sector and financial problems faced by Jengka Development Corporation in developing the town. One of the reasons for the slow growth of the non-agricultural sector was that most of the settlers in JENGKA region spent money in other towns outside JENGKA, such as Kuantan, Temerloh, Tongkial and even Kuala Lumpur. This phenomenon resulted in the slow development of commercial and service activities in Bandar Pusat. There was also little progress in industrial development since the region was less attractive for industrial investors compared to other places such as the towns of Kuantan, Temerloh, Maran and Bentong.

3.2.1 Employment

By 1982, some 19,056 jobs had been created in the JENGKA region (excluding employment in existing villages). Agriculture was the main employment sector, comprising 74 per cent of the total labour force. Industry was the second most important sector with 12 per cent of total employment (Table 3-1). The industries in JENGKA are mainly oil palm factories and rubber processing plants. Since most of the agricultural land has been developed, not many employment opportunities will be available in the future. LKWJ projected that only 3700 new jobs will be created in the region between 1982 and 2000, with an average of 205 jobs per year (LKWJ, 1983). This means that many of the younger generation will be moving out of the region to search for jobs in the near future.

Table 3-1: EMPLOYMENT STRUCTURE IN JENGKA REGION 1982 AND
PROJECTED STRUCTURE IN 2000

Employment Category	1982 (1)	2000 (2)
	Per cent	Per cent
Agriculture	74.3	67.3
Government Services *	6.9	11.2
Commerce	6.0	8.1
Industries	12.0	12.0
Transport	0.2	0.3
Construction	0.5	0.9
Others	0.1	0.2
Total	100.0	100.0
Number	19056	22800

*Includes educational institution

Source: Adjusted from LKWJ, 1983.
(adjusted according to new boundary)

Note: 1. existing employment
2. projected employment

3.2.2 Population

In 1980, the population in JENGKA was estimated to be around 55,500 (LKWJ, 1983:22). In the expanded area the population in the region in 1984 was about 132,500, which included the residents in FELDA settlement schemes, Bandar Pusat and the villages included in the region after the expansion of the boundaries in 1983 (Table 3-2).

Table 3-2: POPULATION OF JENGKA REGION 1984

Type of Settlement	Population	Per cent
FELDA Settlement*	92000	69.5
Bandar Pusat	4129	3.1
Existing Villages	36339	27.4
Total	132468	100.0

* Estimated

Source: Adapted from LKWJ, 1985

The majority of the population in the FELDA settlement schemes and in Bandar Pusat were migrants. Most of them arrived during the 1970-1980 period, since 86 per cent of FELDA settlers entered the schemes in the 1970s and the development of Bandar Pusat also took place during that period.

From the FELDA settlers census of 1976, out of 6748 settlers in 22 FELDA schemes in JENGKA, 31 per cent were from Pahang. The states of Kedah, Kelantan, Perak and Selangor were other main sources of migrants to FELDA schemes in JENGKA (Table 3-3). Within Pahang State, most of the settlers came from the districts of Temerloh, Lipis and Jerantut (Table 3-4). These are the districts which are within JENGKA or near to the JENGKA region.

Table 3-3: STATES OF ORIGIN OF SETTLERS IN 22 FELDA
SETTLEMENT SCHEMES, JENGKA 1976

State	Number of Settlers	Per cent
Johor	293	4.3
Kedah	919	13.6
Kelantan	794	11.8
Melaka	226	3.3
Negeri Sembilan	103	1.5
Pahang	2151	31.9
Perak	708	10.5
Perlis	73	1.1
Pulau Pinang	455	6.7
Selangor	631	9.4
Terengganu	375	5.6
Others	4	0.1
Unknown	16	0.2
Total	6748	100.0

Source: Adapted from FELDA Settlers Census
1976.

Note: The state of origin is the state in which
settlers reside at the time of their
application to become settlers.

**Table 3-4: DISTRICTS OF ORIGIN OF SETTLERS FROM PAHANG,
IN 22 SETTLEMENT SCHEMES, JENGKA 1976**

Districts	Number of Settlers	Per cent
Bentong	52	2.4
Cameron Highland	1	0.0
Jerantut	425	19.8
Kuantan	96	4.4
Lipis	498	23.1
Pekan	264	12.3
Raub	99	4.6
Temerloh	716	33.3
Unknown	2	0.1
Total	2151	100.0

Source: Adapted from FELDA Settlers Census
1976.

3.3 Development in The Development Authority of Pahang Tenggara (DARA) area

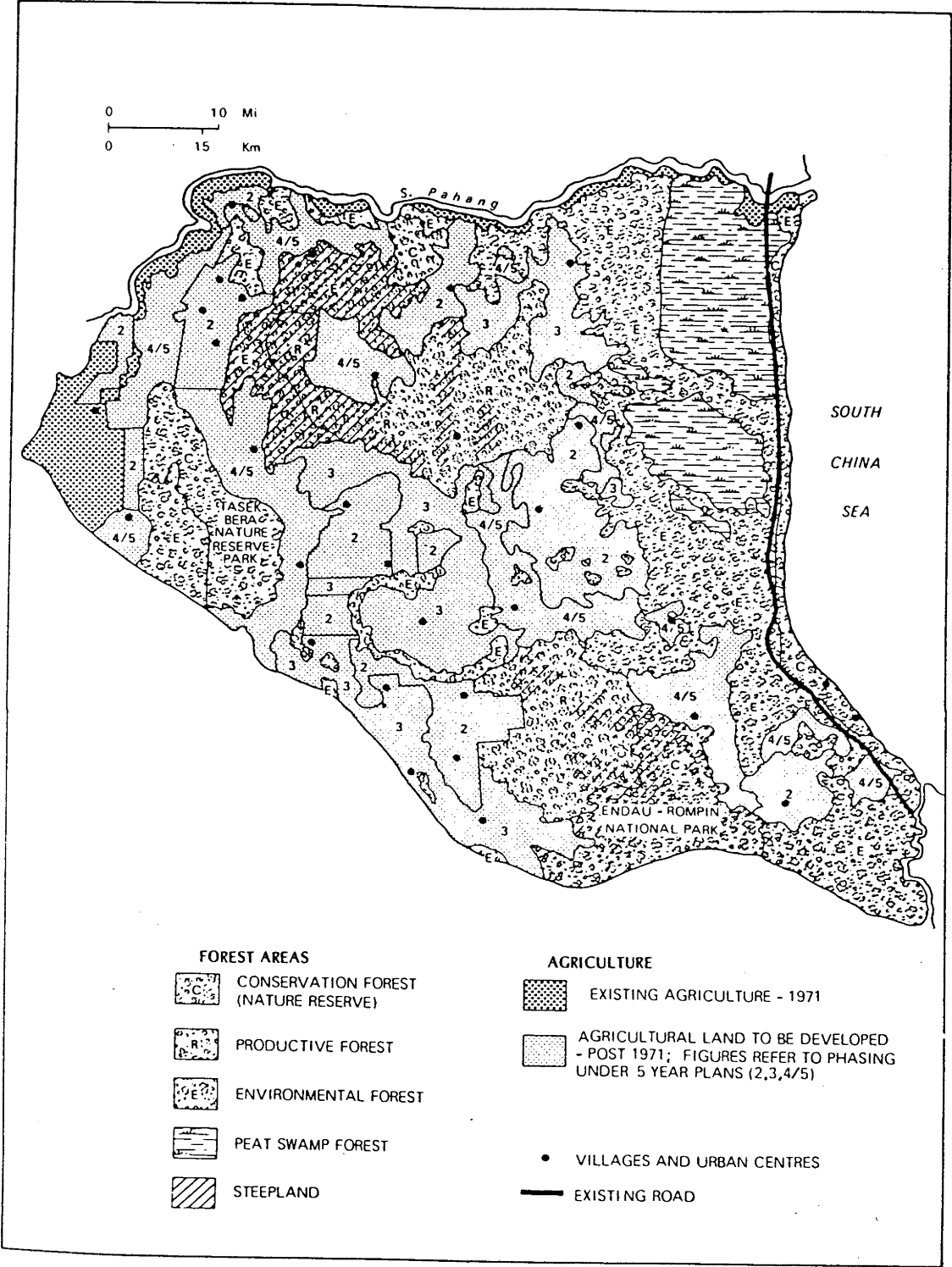
The Pahang Tenggara Region covers an area of approximately 1 million hectares and it is located in the southeastern part of Pahang State. The area was relatively flat with swamplands at the eastern part of the region and some hilly and mountainous land located in the northwestern and southern parts (Figure 3-2). From the Pahang Tenggara Master Plan Studies (1972), some 254,000 hectares of land were recommended for agricultural development, 10,000 hectares for a forestry complex and 200,000 hectares for logging and other uses. The master plan also proposed 36 new townships in the region with a total population of 450,000 by the year 1990. However, only 23 townships (including existing Bandar Ibam) had been developed by 1984. The road system in the area is in fairly good condition with the Kuantan-Segamat Highway that run across DARA region providing easy access to Johor State.

3.3.1 Development of Land in the DARA region

Four main groups have been involved in the development of land in the DARA region: the public sector (FELDA, FELCRA, LKPP, RRIM and MARDI); joint ventures of public and private sector groups; private sector organisations; and individual farmers. By 1984 some 310,670 hectares of land had been approved for agricultural development. The main land uses approved were oil palm, rubber, cocoa, mixed crops, beef farming and agricultural research.

The public sector plays a major role in land development, and was responsible for developing 53.6 per cent of land approved for agriculture. A large portion (33.4 per cent) was also approved for private sector development (Table 3-5). However, only 56 per cent of the approved land was developed by 1984. The achievement of each sector varied, with public sector and joint ventures having higher achievement levels than private and individual groups. FELDA, which developed more than 80,000 hectares of land, had developed the largest amount of land (Table 3-6). Most of the land developed was under oil palm, possibly due to the more promising returns from that crop. Prior to 1984 the price of palm oil has been quite stable and high.

Figure 3-2: THE PROPOSED LAND USE OF DARA REGION



Source: Pahang Tenggara Regional Master Plan Study, cited in Aiken, et. al., 1982:145

Table 3-5: LAND APPROVED FOR AGRICULTURAL
DEVELOPMENT, DARA 1984

Developer	Areas by Type of Crops (Hectares)					Total	%
	Oil Palm	Rubber	Cocoa	Mixed*	Others**		
Public Sector							
FELDA	88853	18211	12942	-	18763	138769	
Others	13007	11339	-	-	3395	27741	
Sub-total	101860	29550	12942	-	22158	166510	53.6
Joint Ventures	12522	-	769	567	7717	21575	6.9
Private Sector	85860	3437	1901	1872	10645	103715	33.4
Individuals	1032	107	-	17717	14	18870	6.1
Grand Total	201274	33094	15612	20156	40534	310671	100.0
Per cent	64.8	10.7	5.0	6.5	13.0	100.0	

* Include fruit crops and vegetables

** Beef farming and agricultural research

Source: Tabulated from DARA, 1984.

3.3.2 Existing Employment

Employment in the region is sub-divided into five categories, agriculture, industrial, commercial, construction and government services. The analysis here is based on the number of workers in each category of employment and is tabulated according to towns in the region. The number of workers in each town refers to the workers living in the town and its hinterland. By 1984 some 24,000 jobs were created in the region. Since the region is agriculturally based, more than three-quarter of all employment was in the agricultural sector. This included estate labour, individual farmers and FELDA settlers. In all

Table 3-6: DEVELOPMENT OF AGRICULTURAL LAND,
DARA 1984

Developer	Areas by Type of Crops(Hectares)					Total	%
	Oilpalm	Rubber	Cocoa	Mixed	Others		
Public Sector							
FELDA	73108	6879	2167	-	-	82154	
Others	8640	8764	-	-	860	18264	
Sub-total	81748	15643	2167	-	860	100418	56.9
Joint Ventures	8794	-	-	-	4847	13641	7.7
Private Sector	53132	-	-	-	-	53132	30.1
Individuals	-	-	-	9435	-	9435	5.3
Grand Total	143674	15643	2167	9435	5707	176626	100.0
Per cent	81.3	8.9	1.2	5.3	3.3	100.0	

Source: Tabulated from DARA, 1984.

the towns there is a commercial sector and most of the towns also have industrial employment (Table 3-7). The construction sector is limited to those towns where such activities were taking place at the time of the data being collected, and the workers in this sector tended to move about within the region according to the location of building projects. Eleven of the towns did not have public service workers because those towns were still at an early stage of development, and public facilities such as school, clinics and post offices were not yet operating.

3.3.3 Projected Employment

The projected figures for employment in 13 towns by 1990 are shown in Table 3-8 (DARA, 1985). Employment here is grouped under three categories: agriculture, contract and induced workers. Contract workers are temporary workers who work on a contract basis in plantations at the early stages of land development, especially for land clearing and planting, and also construction workers. The induced workers are those in service, industrial and commercial sectors. The details on how the number of induced workers was derived are not available, but the

Table 3-7: EMPLOYMENT BY SECTOR AND TOWN,
DARA 1984

Town*	Agricul -tural	Indust -rial	Commercial	Construc -tion	Services	Total
Bandar Cini	1991	411	58	-	140	2600
Mentiga Timor	430	-	8	-	-	438
Paloh Hinai	143	-	8	-	-	151
Cempaka	337	-	1	-	-	338
Ibam	-	194	61	-	475	730
Kota Perdana	719	128	12	-	6	865
Mu'adzam Shah	870	55	75	130	828	1958
Bandar 11	530	34	-	-	-	564
Melati	842	-	4	-	-	846
Kota Bahagia	1154	107	36	-	38	1335
Kota Shahbandar	317	-	4	-	-	321
Pekoti Timur	269	80	2	-	-	351
Chenderawasih	782	285	13	-	-	1080
Perwira Jaya	925	113	14	-	-	1052
Perantau Damai	638	-	5	-	40	683
Bandar 21	677	-	5	-	52	734
Tun Abdul Razak	2512	53	122	-	148	2835
Selancar	595	-	56	23	-	674
Kepayang	1678	148	64	-	197	2087
Bera	1669	159	55	-	157	2040
Bandar 34	937	244	8	-	-	1189
Bandar 35	663	-	6	-	-	669
Seladang	306	-	1	110	-	417
Total	18984	2011	618	263	2081	23957
Per cent	79.2	8.4	2.6	1.1	8.7	100.0

* The employment of each towns include employment in its hinterland.

Source: Tabulated from DARA, 1984.

procedure as used in the Master Plan Studies (1972) was to calculate the figure from the ratio of 'generating workers' (agriculture) to induced workers.

The projection figures indicate that considerable employment opportunities are expected in the DARA region in the future. Agriculture will continue to be the main employment sector in the region, representing more than 70 per cent of the total in 1990. The figures would be much higher if all the towns were included in the projection.

Table 3-8: PROJECTED EMPLOYMENT BY MAIN CATEGORIES OF
13 TOWNS IN DARA 1990*

Towns	Agricul -tural	Contract	Induced	Total
Bandar Cini	3176	-	1313	4489
Paloh Hinai	2590	109	874	3573
Kota Perdana	1527	209	588	2324
Kota Shahbandar	1047	90	424	1561
Pekoti Timor	1104	-	434	1538
Cenderawasih	805	-	315	1120
Perwira Jaya	7540	-	1443	8983
Perantau Damai	1324	-	446	1770
Bandar 21	2126	-	664	2790
Tun Abdul Razak	2836	-	1524	4360
Selancar	3087	-	1110	4197
Seladang	3269	-	1170	4439
Bera	1361	-	541	1902
Total	31792	408	10846	43046
Per cent	73.9	0.9	25.2	100.0

*Information on projected employment only available for 13 towns in DARA. The employment of each town include employment of its hinterland.

Source: Tabulated from DARA, 1985.

3.3.4 Population

The development of each town in DARA was based on the clustering of population of the several land schemes into one centralised place. Such settlements or towns are larger than typical FELDA settlements elsewhere. These should then provide larger threshold populations to support higher-order urban facilities and a greater variety of services.

The population of each town in Table 3-9 covers those who live in the town (or settlement) and the hinterland of the town, such as in agricultural plantations. In 1980, 43,793 people lived in 21 towns in DARA region. Only two towns had a population of more than 5,000. In 1984 the population had increased to 83,010 with 5 towns having a population of more than 5,000. The majority of the population were expected to be migrants who came from various places within Pahang and outside Pahang. The population mentioned above does not include the residents of traditional villages and the Aboriginal population in the region, estimated to be about 44,000 in 1984 (DARA, 1985).

Table 3-9: POPULATION OF TOWNS IN DARA
1980 AND 1984

Towns	1980*	1984**
Bandar Cini	1608	9174
Mentiga Timor	-	502
Paloh Hinai	838	870
Cempaka	150	331
Ibam	2830	2800
Kota Perdana	810	1569
Mu'adzam Shah	2403	6715
Bandar 11	-	665
Melati	939	854
Kota Bahagia	2825	3390
Kota Shahbandar	423	452
Pekoti Timur	423	480
Chenderawasih	1259	1614
Perwira Jaya	954	1850
Perantau Damai	491	2933
Bandar 21	291	2584
Tun Abdul Rzak	10193	16059
Selancar	507	826
Kepayang	9123	15877
Bera	4614	9981
Bandar 34	1921	2003
Bandar 35	672	619
Seladang	519	862
Total	43793	83010

Source: Tabulated from;

* DARA, 1980

** DARA, 1984

3.4 Inter-state and Intra-state Migration in Pahang

The previous section noted that a substantial number of people were settling in the new settlements in JENGKA and DARA, and it was expected that a large portion of them would be migrants who came from within Pahang state and outside Pahang. In this section the pattern of intra-state and inter-state migration in Pahang will be analysed and related to the development of JENGKA and DARA. The data on migration are obtained from the 1980 census, based on information about current and previous place of residence according to districts in Pahang. Thus migration here refers to changes of the place of residence across district boundaries.

Table 3-10 shows intra-state and inter-state migrants in Pahang in 1980. Four districts had a net intra-state migration gain: Kuantan, Temerloh, Rompin and Jerantut. Bentong and Cameron Highland tend to have a balance of intra-state in-migrants and out-migrants, while Lipis, Pekan and Raub experienced intra-state net out-migration. The main sources of intra-state migrants to Kuantan were Pekan, Temerloh, Lipis and Raub; migrants to Temerloh were mainly from Lipis, Pekan and Raub; migrants to Rompin were from Temerloh, Pekan and Raub, while Jerantut received a net migration gain from Lipis and Raub.

The net gains by Temerloh, Rompin and Jerantut were obviously due to the development in JENGKA and DARA which were located in these districts. However, Pekan, which was also included in DARA, experienced net out-migration and was the main source of migrants to Kuantan, Temerloh and Rompin. This was due to the fact that most of the development in DARA was located in Rompin and Temerloh districts rather than Pekan. Kuantan District, where the state capital of Pahang was located, received net in-migrants since industrial, commercial and government activities were concentrated there.

Despite Temerloh receiving a major inflow of net migrants, it also had a substantial number of out-migrants to Kuantan and Rompin. This was possibly because Temerloh has a larger population. It could also be related to out-migration of the second generation of the population in the settlement schemes which will be examined in Chapter 5.

Table 3-10: INTER-STATE AND INTRA-STATE
MIGRANTS IN PAHANG 1980

Districts	Intra-State Migrants			Inter-State Migrants			Total Net M.	
	In	Out	Net	In	Out	Net	No.	Rate(%)
Bentong	7185	7755	- 570	17495	9143	8352	7782	10.7
Cameron Highland	532	688	- 156	6969	3455	3514	3358	15.6
Jerantut	10659	9072	1587	18215	3726	14489	16076	23.8
Kuantan	17487	8678	8809	48264	19363	28901	37710	22.1
Lipis	4886	11052	-6166	11051	6830	4221	- 1945	- 3.4
Pekan	6855	13439	-6584	8978	3731	5247	- 1337	- 2.1
Raub	5070	9285	-4215	9010	7536	1474	- 2741	- 4.3
Temerloh	20902	15622	5280	61864	14496	47368	52648	24.7
Rompin	5295	3280	2015	12646	2514	10132	12147	31.2
Total	78871	78871	0	194492	70794	123698	123698	

Source: Calculated from Malaysia, Department of Statistics, 1983(b).

Note: 1. The calculation is based on previous place of residence data according to districts.

2. It does not include mover outside Peninsular Malaysia and the unknown place of previous residence.

When inter-state migrants are included, another two districts, Bentong and Cameron Highland had positive net migration. This indicates that intra-state net out-migration from these districts had been exceeded by inter-state net in-migration. All other districts, in fact, gained net inter-state migrants, with Temerloh, Kuantan, Jerantut and Rompin sharing the greater number. However Lipis, Pekan and Raub still had net losses of migrants because intra-state out-migrants outnumbered net inter-state in-migrants. When rates are used, Rompin had a higher net in-migration followed by Temerloh, Jerantut and Kuantan. The main sources of net inter-state in-migrants were Perak, Kelantan and Terengganu.

It was also observed that, despite Pahang experiencing substantial net in-migrants from other states, the Federal Territory tended to gain net migrants from Pahang state, especially from Rompin, Lipis, Bentong and Temerloh. This could be related to the rapid growth of secondary and tertiary activities in the Federal Territory which provided ample opportunities for migration, as those districts mentioned above are quite close and have very good access to the Federal Territory.

3.5 Conclusion

Development in JENGKA and DARA had a significant influence on migration in Pahang. The districts of Temerloh, Jerantut and Rompin, where major development activities of JENGKA and DARA are located, have experienced substantial inflows of migrants from within Pahang and other states of Peninsular Malaysia.

Since there is greater development potential in the DARA region, it is expected to be the major attraction for migrants in the future. As for the JENGKA region, since almost all land allocated for agriculture had been developed, there are less prospects for migrants in the near future, except for the development of Bandar Pusat, which will probably not be substantial. In fact, the development of agricultural settlement schemes in JENGKA gives few opportunities for future generations of settlers to remain. Massive out-migration from the region in the near future may occur, as the children of settlers search for opportunities

elsewhere. Even though regional development has been successful in attracting migrants from existing rural areas, it may, in the long term, act to pool potential out-migrants in the 'frontier regions'. The subsequent chapters will examine who were the migrants to the frontier region in JENGKA and their potential for future out-migration.

CHAPTER 4

CHARACTERISTICS OF MIGRANTS TO THE SETTLEMENT SCHEMES IN A FRONTIER REGION

4.1 Introduction

In the preceding chapter it was found that regional development in JENGKA and DARA had a significant impact on migration in Pahang. In this chapter the characteristics of migrants to the settlement schemes in the frontier region will be examined. The presumption is that migrants to the settlement schemes were not "potential" migrants, that is, they would not have moved if there had been no opportunities in the settlement schemes. The data for this analysis were obtained from the FELDA settlers census 1976. Three settlement schemes in JENGKA were selected, Jengka 12, Jengka 13 and Jengka 14, in which the date of entry of settlers to these schemes was 1975, one year prior to the census. Thus the characteristics of these settlers probably reflect the characteristics of migrants at the time of migration. The first part of this chapter will briefly describe the criteria of settler selection for the schemes and the characteristics of potential migrants. The second part will examine the characteristics of migrants in the settlement schemes.

4.2 Selection of Settler

The characteristics of migrants to the settlement schemes is to some extent determined by the settler selection procedures. According to FELDA (1965:74-75), persons with the following qualities were eligible to become settlers:

1. Federal citizens or state nationals [those born in the state where the scheme is located].
2. Between 21 and 50 years of age.
3. Married, preferably with children.
4. Landless or with less than 2 acres of land.
5. With an agricultural background, preferably

- with some useful additional skills.
- 6. Having no criminal record.
- 7. Physically fit with normal function of the limbs and senses, thereby enabling them to undertake hard outdoor work.
- 8. Willing to abide by the conditions of entry and the rules and regulations prevailing in a land development scheme.

The "point system" was used in the process of settler selection where those who were landless, around 35 years of age, with a large number of dependents, physically fit, and had additional skills, enthusiasm and determination to work hard, were given relatively more points than others. Quotas of settlers by place of origin were also considered in the selection process. Normally priority was given to State Nationals where the schemes were located, with a quota of at least 50 per cent. In addition to that, 20 per cent of the places in all schemes were reserved for ex-members of security forces. In cases where the quotas were not achieved, the places would be given to others.

4.3 Characteristics of Potential Migrants

The characteristics of potential migrants are outlined here to compare with the characteristics of settlers in the settlement schemes. This comparison will give some indication of whether settlers in settlement schemes were actually potential migrants. Pryor (cited in Gosling, 1982:82) summarised the following main characteristics of migrants in Peninsular Malaysia:

1. The majority of migrants were clustered in the 15-34 age range, with a focus on those age 20-24.
2. Malays were the most mobile group. Among Malays, most migrants were single males. Most were long-distance migrants, particularly those in the 20-24 years-old category.
3. Most migrant families were small, with one to three children, compared with non-migrant families of four or more children. Migrant fecundity was also high, with a desire for more children, but the ideal family size was less than among non-migrants.
4. The main motivation for migration was to find employment.
5. Migrants had higher levels of education than non-migrants.
6. Studies of migrants in one state, Selangor, found that they were usually service workers, labourers and in clerical occupations, as opposed to non-migrants who were in agriculture, labouring and sales.
7. Migrants tended to be informed of opportunities for migration by family, friends and their own prior experience.

The characteristics of migrants above are the general characteristics of migrants irrespective of area of destination. The Kuala Lumpur Master Plan Studies (1980) indicated that recent migrants (1970s) to Kuala Lumpur were predominately Malay, concentrated in age group 20-24. Educational attainment among migrants tended to be secondary level, with an increasing proportion of college and university educated persons. The main types of migrant occupations were in the production, clerical and service sectors. Most of the migrants moved for family related reasons, employment purposes and education. Chan (cited in Gosling, 1982) in his sample study of rural migration in West Johor, distinguished the characteristics of potential rural-to-urban and rural-to-rural migrants. These are summarised in Table 4-1. However, it should be noted that the findings of this study must be interpreted with caution because the study used only small samples in West Johor and therefore might not be applicable to the rest of the country. Furthermore, comparisons made to that study should only be treated as suggestive. In this study only some of the characteristics of migrants in settlement schemes will be analysed, since not all of the information as outlined by Chan or Pryor is available.

4.4 Characteristics of Settlers in the Settlement Schemes

The characteristics of settlers to be analysed here are age, household size, education, occupation and income. Data from the 1976 settlers' census were available on 716 settlers (all but two of whom were males) in three schemes in JENGKA.

4.4.1 Age

Table 4-2 shows age distribution of settlers in the settlement schemes one year after arrival. The age distribution ranges from 20 to 55 years, clustering between 25-39 with the modal class being 25-29. More than 50 per cent were aged above 30, which reflects the priority of selection for persons around 35. The mode is much lower than the priority age, possibly because there were fewer applications from persons around age 35, which gave persons of younger ages more chance of being selected. The overall age distribution tended to be older than the typical age of migrants in Peninsular Malaysia, which averaged around ages 20-24.

Table 4-1: CHARACTERISTICS OF POTENTIAL RURAL OUT-MIGRANTS
FROM WEST JOHORE

Characteristics of Potential Migrants *	Intended	Direction
	Rural-to-Urban	Rural-to-Rural
Age	Young (15-25)	Older (29+)
Sex	Male	Male; probably entire family
Education	Generally with an average of 7 years of schooling, i.e secondary schooling.	Religious education or only a few years of primary schooling.
Family Size	Not relevant; unmarried or newly married	Large household size; about 5.5 household members
Occupation/ Skill	Little employment experience	Agricultural background
Urban Contacts	High urban awareness	More contacts with rural places
Land Ownership	Landless	Own small plots or mostly landless
Modern Attitudes	Ambitious, risk-taker	Generally risk-averse
Motive for Migration	Self-improvement; prefer non-agricultural life	Seek land and higher income for family

*The the term "potential migrants" refers to those with an intention to move within two years.

Source: Chan, cited in Gosling, 1982:87

The age structure of the settler population as a whole is shown in Table 4-3. The population at this early stage of settlement schemes clusters in ages 0-9, mainly settlers children, and ages 20-39, the settlers and their spouses. This is due to the fact that settlers in the schemes usually come with their families.

**Table 4-2: AGE OF SETTLERS IN 3 SETTLEMENT SCHEMES,
JENGKA 1976**

Age Group	Number	Per cent	Cumulative percentage
20-24	101	14.1	14.1
25-29	240	33.5	47.6
30-34	147	20.5	68.1
35-39	148	20.7	88.8
40-44	70	9.8	98.6
45-49	3	0.4	99.0
50-54	7	1.0	100.0
Total	716	100.0	

Source: Adjusted from FELDA Settlers Census 1976.

**Table 4-3: AGE STRUCTURE OF SETTLERS POPULATION IN
3 SETTLEMENT SCHEMES, JENGKA 1976**

Age Group	Male		Female		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
0-4	399	27.4	378	27.1	777	27.2
5-9	225	15.5	191	13.7	416	14.6
10-14	80	5.5	73	5.2	153	5.4
15-19	39	2.7	117	8.4	156	5.5
20-24	111	7.6	229	16.4	340	11.9
25-29	234	16.1	200	14.3	434	15.2
30-34	146	10.0	91	6.5	237	8.3
35-39	143	9.8	73	5.2	216	7.6
40-44	66	4.5	25	1.8	91	3.2
45-49	12	0.8	4	0.3	16	0.5
50-54	0	0.0	5	0.4	5	0.2
55+	1	0.1	10	0.7	11	0.4
Total	1456	100.0	1396	100.0	2852	100.0

Source: Adjusted from FELDA Settlers Census 1976.

4.4.2 Family Size

The family, as opposed to the resident household in the 1976 settlers' census, included the settler, his or her spouse, and all their dependent children, including those not resident in their home. The average family size of settlers was 5, with the majority, 74 per cent, ranging between 3 and 6, and about 19 per cent being more than 6 persons (Table 4-4). This is similar to the average family size of non-migrants, who have large average family sizes of 4 or more children (Pryor, 1979:111), and potential rural-to-rural migrants, with average households of 5.5 persons.

Table 4-4: DISTRIBUTION OF FAMILY SIZE OF SETTLERS IN 3 SETTLEMENT SCHEMES, JENGKA 1976

Family Size	Number of Settlers	Per cent
2	49	6.9
3	164	22.9
4	147	20.6
5	127	17.8
6	94	13.1
7	61	8.5
8	34	4.8
9	22	3.1
10	8	1.1
11+	9	1.2
Total	715*	100.0

* one missing case

Source: Adapted from FELDA Settlers Census 1976.

4.4.3 Educational Attainment

Education is a socio-cultural variable which has a relationship with migration. Chan, in his sample study in West Johor observed that potential rural-to-urban migrants on average have secondary level educational attainment, as compared to potential rural-to-rural migrants with only a few years of primary education (Table 4-1). This study found that educational attainment among settlers was low by Malaysian standards, with only 7 per cent reporting lower secondary or higher educational attainment compared to 37 per cent and 44 per cent of the Malay male population ages 20-44 in Pahang and Peninsular Malaysia respectively. Most settlers, 83 per cent, attained primary education with less than 7 years at school and 9 per cent had no education (Table 4-5). The reason could be that the selection criteria for settlers do not require a particular educational qualification, and the nature of settlers' work (which is largely out-door physical labour and requires self-motivation) does not attract those who are better educated and who have wider job options, particularly in the service and industrial sectors.

Table 4-5: EDUCATIONAL ATTAINMENT OF SETTLERS
IN 3 SETTLEMENT SCHEMES, JENGKA 1976 AND MALAY
MALES AGED 20-44, IN PAHANG AND PENINSULAR MALAYSIA 1980

Level of Education	Per cent		
	JENGKA	Pahang	P.Malaysia
No Education	9.4	8.8	8.8
Primary Education	83.3	54.5	47.6
Lower Secondary	6.1	32.0	36.6
Upper Secondary or Higher	1.2	4.7	7.0
Total	100.0	100.0	100.0

Source: 1. Adapted from FELDA Settlers Census 1976.
2. Calculated from Malaysia, Department of Statistics, 1983(b).

4.4.4 Employment

According to Chan's sample study in West Johor, potential rural-to-urban migrants tend to have little employment experience and potential rural-to-rural migrants tend to have agricultural backgrounds (Table 4-1). Pryor (1977), said that migrants are usually service workers, labourers or in clerical occupations. In this study before entering the schemes settlers were mainly rice farmers, rubber tappers, labourers and oil palm workers (Table 4-6). A comparison with the characteristics, in Table 4-1 indicates that the settlers' previous occupations were more comparable to those of non-migrants or potential rural-to-rural migrants.

**Table 4-6: OCCUPATION OF SETTLERS BEFORE ENTERING
THE SCHEMES IN 3 SETTLEMENT SCHEMES, JENGKA 1976**

Previous Occupation	Number	Per cent
Trader	25	3.5
Rice Farmer	342	47.9
Fisherman	9	1.3
Rubber Tapper	191	26.8
Oil Palm Plantation Worker	40	5.6
Ex-servicemen	11	1.5
Labourer	80	11.2
Unemployed	16	2.2
Total	714*	100.0

* 2 missing cases

Source: Adapted from FELDA Settlers Census 1976.

4.4.5 Income

Only a very few settlers (0.3 per cent) reported not earning any income before entering the schemes. Most of them had already earned some income and had been employed or self-employed. However their incomes were relatively low, with more than 90 per cent earning less than M\$300 per month, and the modal class being M\$100 or less per month (Table 4-7). This could be related to the nature of their occupations, as rice farmers, rubber tappers and rural labourers were in low productivity occupations. Since most of them had already earned some income and their incomes were relatively low, it was expected that their motive for migration was to earn higher income or obtain better living conditions. In fact, most of the settlers were better off after entering the schemes compared to the rest of the rural population.

Table 4-7: AVERAGE MONTHLY INCOME OF SETTLERS BEFORE
ENTERING SETTLEMENT SCHEMES IN 3 SETTLEMENT
SCHEMES, JENGKA 1976

Income(M\$)	Number	Per cent
Nil	2	0.3
100 and Less	346	50.7
101-200	244	35.8
201-300	66	9.7
301-400	17	2.5
401-500	4	0.6
501 and More	3	0.4
Total	682*	100.0

*34 missing cases

Source: FELDA Settlers Census 1976.

4.5 Motives for Migration

There is no information on the motive for migration to the settlement schemes from the FELDA settlers census. However studies done by MacAndrews and Yamamoto (1975) indicate that although employment was the most significant factor in causing movement to the settlement schemes, the majority (70 per cent) indicated that they would not have moved if FELDA had not offered them a place.

Chan (cited in Gosling, 1983) in his sample study in West Johore found that the main motivation of FELDA settlers to migrate was the opportunity to own land, as indicated by 82 per cent of his sample. Only 5.7 per cent migrated because of unemployment. He also found that 70 per cent of the respondents would not have moved from their previous location if not selected for FELDA settlement, while 30 per cent indicated that they intended to migrate, even if they had not been accepted into the FELDA schemes. From the above findings, it seems that FELDA's offerings, the ownership of land, a house, better income and other socio-economic benefits, are most likely to cause them to migrate.

4.6 Conclusion

It is possible to conclude from this analysis that the characteristics of migrants to the settlement schemes in the frontier regions differed from those of rural-to-urban migrants, and were more similar to those of rural-to-rural migrants or of non-migrants. The age of the settlers was generally between 25-39, and most had large family sizes with an average of 5. Educational attainment was low, and most had been employed in rural occupations before coming to the schemes. Most of them had already earned some income, which indicates that they migrated to seek better living conditions.

The analysis of the motivation for migration has suggested that most of the settlers moved because of 'pull' factors in frontier regions, specifically the chances of owning land and getting better incomes, rather than rural 'push' factors of unemployment and backwardness. Those who migrated tended to be the "induced" migrants who would not have moved elsewhere had there been no opportunities given to

them in the frontier regions. The succeeding chapter will examine the potential of out-migration generated in the frontier region.

CHAPTER 5

OUT-MIGRATION FROM KAMPUNG AWAH, A SETTLEMENT SCHEME IN A FRONTIER DEVELOPMENT REGION

5.1 Introduction

This chapter will examine the characteristics of out-migrants from a specific land settlement scheme in a frontier region and speculate on the potential of out-migration from such areas in Pahang. The development of frontier regions in Peninsular Malaysia, which are agriculturally based, does not usually create extensive multiplier effects for the further development of other economic activities, such as manufacturing and services. Such development can thus be seen to be static with not many further employment opportunities created outside of agriculture. As a result there is a potential for considerable out-migration from frontier regions in the near future. In this chapter, the tendency for this to happen will be examined in order to give some information on potential migrants from frontier-area land settlement schemes. This will then be related to the observation of Gosling (1985:90) that "...the second generation from FELDA schemes will be urban migrants, and FELDA schemes can be seen as a way station, a stage along the way to the city, serving the same intermediate role in step migration as is often served by smaller urban centers." However, the phenomenon of out-migration from the settlement schemes may not be a "bad" thing because the purpose of the schemes was to exploit resources, and that will continue at a relatively high level of productivity. In fact, even if the second generation was not from the settlement schemes, migration to urban areas might also occur due to advancements in communication, education, and other facilities in rural areas. The issues could be the "depopulation effect" in the settlement schemes or the frontier regions as a whole, and the implication of migration for the areas of destination, particularly those which were already over congested such as the Kuala Lumpur-Kelang Valley region. However these

issues are not the subjects of this study. The first part of this chapter will describe the background of Kampung Awah, and some characteristics of population in the scheme. The second part will discuss out-migration from Kampung Awah.

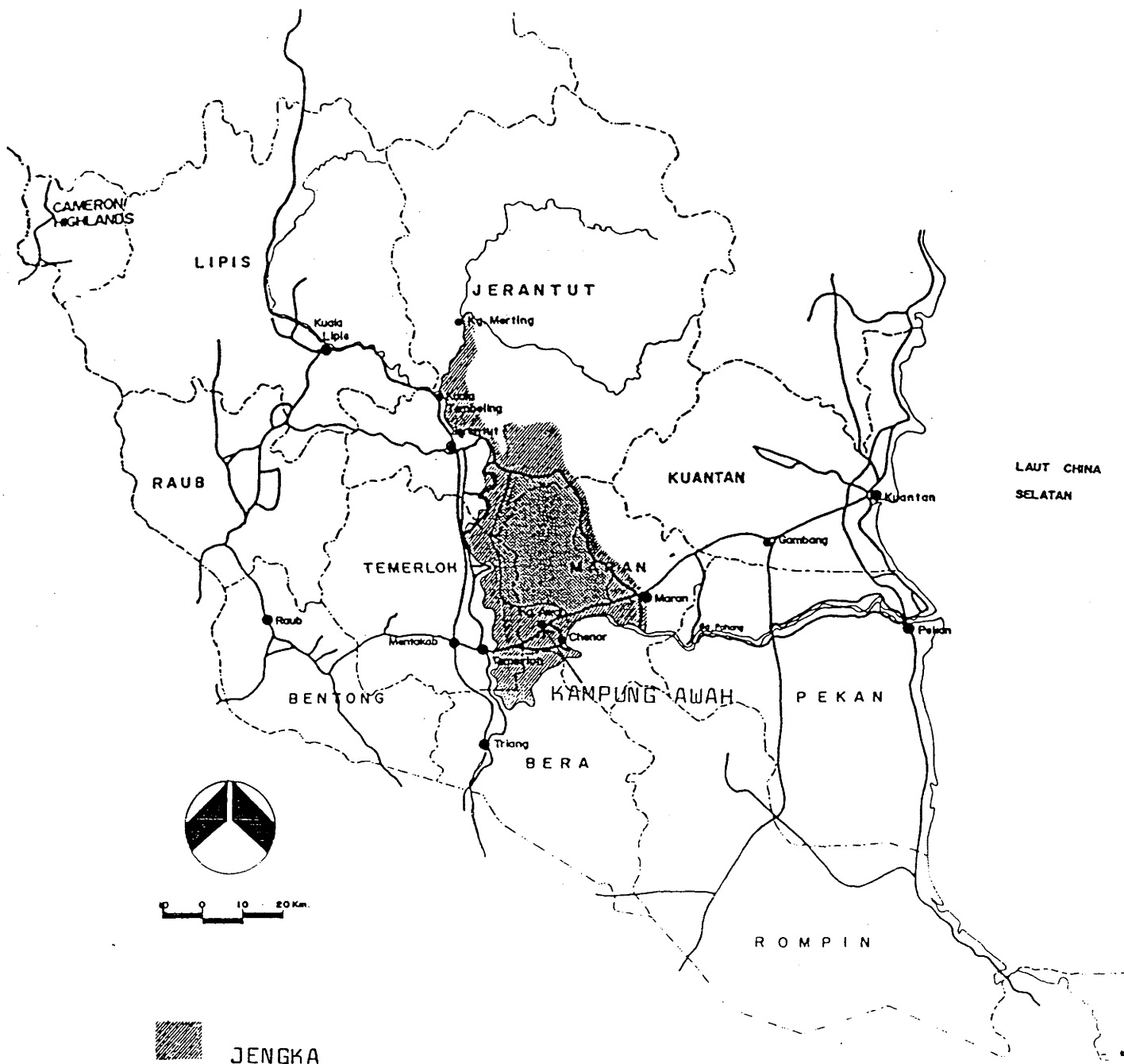
5.2 Background of Kampung Awah

The Kampung Awah scheme began in 1960 and was developed in three stages. The main crop is rubber with some oil palm. The entry of settlers to the scheme was also in three stages: stage one in 1961 with 127 settlers, stage two in 1962 with 133 settlers, and stage three in 1967 with another 74 settlers. By the end of 1967 there were 334 settlers altogether. The settlement was located in JENGKA and not far away from the highway which joins Kuantan (the state capital) and Kuala Lumpur (Figure 5-1). Due to this position, it is considered to have very good access to nearby towns along the highway such as Temerloh and Maran, as well as Kuantan and Kuala Lumpur. The approximate time to travel by car from Kampung Awah to Kuala Lumpur is 3 hours and to Kuantan around 2.5 hours. The settlement is self-contained in terms of facilities, with primary and secondary schools, community facilities, infrastructure and communications. It forms a small town with something of an urban atmosphere in a rural area. The choice of Kampung Awah in this study was based on several factors: it is one of the oldest schemes which has passed through several periods of development and experienced substantial out-migration of the second generation; it is located in JENGKA which is the subject of this study, and the size and facilities available are comparable to most of the schemes in the region. This study could represent other schemes in the region which have similar characteristics.

5.2.1 Population

In 1976, the settler population of Kampung Awah was 1862 and decreased slightly to 1806 in 1986. All of these were Malays and the average household size was 5.4. By assuming that the average rate of natural increase of the population was 3 per cent during the last decade (based on the natural increase of Malays in Pahang), the average net out-migration rate of Kampung Awah was about 3 per cent.

Figure 5-1: LOCATION MAP OF KAMPUNG AWAH



The population of Kampung Awah consisted mainly of settlers and their spouses, children and grand-children (Table 5-1). There were a number of households in which married children stayed with their parents in the settlement.

**Table 5-1: POPULATION COMPOSITION ACCORDING TO SETTLERS
KINSHIP, KAMPUNG AWAH 1986**

Kinship	Number	Per cent
Settlers	111	18.4
Spouses	98	16.3
Children	327	54.3
Grand-Children	44	7.3
Nephew	2	0.3
Mothers	2	0.3
Sons/Daughters- in-Law	11	1.8
Others	2	0.3
Total	602	100.0

Source: Kampung Awah Migration Survey
1986.

5.2.2 Age Structure

The age structure of settler population in Kampung Awah is shown in Figure 5-2. The population was concentrated in ages 5-24 and 40-54, with the modal class lying between ages 15-19. The figures indicated a decreasing number of children aged 0-5 in the settlement, and the population diminished rapidly after age 20. This suggests that substantial amount of out-migration occurred at ages 20 and above and also among women of child-bearing ages. The population in the older ages was mainly settlers and their spouses, while the younger ages were settlers' children and grand-children (Table 5-2).

5.2.3 Educational Attainment

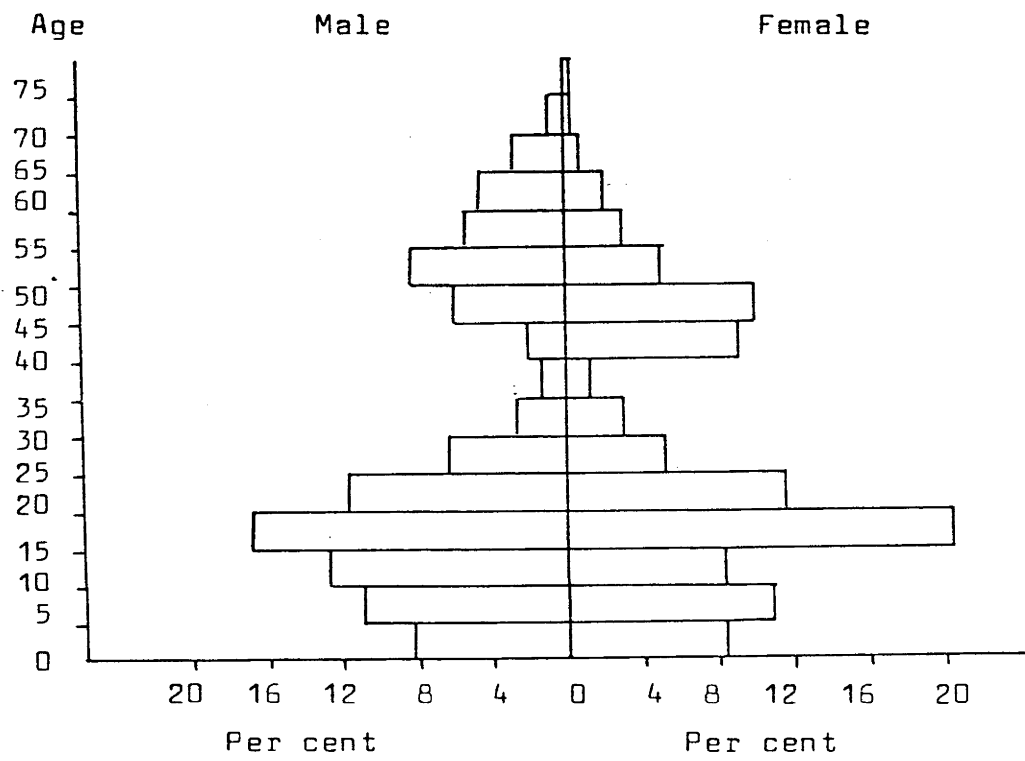
Most settlers in Kampung Awah had only a few years of primary education or no schooling, which was typical for settlers in FELDA schemes throughout the country. Many children were still studying at primary or secondary school level, and among those ages 20 and above 81 per cent attained secondary or tertiary education. This shows that the level of educational attainment among the second generation was improving. This could be due to the availability of educational facilities in the settlement and the progress of education throughout the country.

5.3 Identification of Out-Migrants Characteristics

The characteristics of out-migrants identified in this study are based on a sample survey conducted in February 1986, in Kampung Awah. The data are 'proxy' as out-migrants themselves were not interviewed, but information was obtained from the parents (heads of household) of the migrants.

The following analysis will first examine the place of destination of migrants and purpose of migration, and then identify the characteristics of migrants in relation to rural and urban destination. It includes age and sex structure, marital status, educational attainment, employment, frequency of return and remittance. These factors will provide information on potential rural or urban migrants from Kampung Awah.

Figure 5-2: AGE STRUCTURE OF SETTLER'S POPULATION,
KAMPUNG AWAH 1986



Source: Kampung Awah Migration Survey 1986

Table 5-2: AGE STRUCTURE OF SETTLER'S POPULATION,
KAMPUNG AWAH 1986

Age Group	Settlers/ Spouses (%)	Children (%)	Grand- Children (%)	Others* (%)	Total(%)	
					Male	Female
0-4	-	9.5	36.4	9.1	8.2	8.1
5-9	-	16.2	25.0	-	10.5	10.8
10-14	-	15.9	25.0	-	12.8	8.1
15-19	0.9	31.8	6.8	18.2	17.0	20.5
20-24	1.9	16.8	2.3	50.0	11.8	11.8
25-29	4.3	7.0	4.5	9.1	6.2	5.7
30-34	5.3	1.5	-	4.5	2.6	3.0
35-39	3.3	0.3	-	-	1.6	1.0
40-44	14.4	0.9	-	4.5	2.0	9.4
45-49	23.0	-	-	-	5.9	10.1
50-54	19.1	-	-	-	8.2	5.1
55-59	12.0	-	-	-	5.2	3.0
60-64	9.6	-	-	-	4.6	2.0
65-69	4.8	-	-	-	2.6	0.7
70-74	1.4	-	-	-	0.7	0.3
75+	-	-	-	4.5	-	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	209	327	44	22	305	297

* Includes Brothers and Sisters, Nephew, Mothers, Sons or Daughters-In-Law and Others.

Source: Kampung Awah Migration Survey 1986.

5.3.1 Destination

The survey found that out-migration from the settlement scheme tended to be over short distances. A quarter of migrants moved within JENGKA, and about 40 per cent migrated to other part of Pahang. This means that intra-state migration accounted for 65 per cent of the out-migration from the settlement scheme. Migration to other states was mainly to Federal Territory (Kuala Lumpur), Selangor and Perak (Table 5-3). This finding may be related to the distance and to employment opportunities available in those states. Those states are relatively near and very accessible from the study area.

The place of destination was then classified according to urban and rural areas on the basis that settlements of 10,000 and above are considered to be urban, and less than 10,000 as rural. This is the usual figure used in Malaysia to define an urban centre. The result (Table 5-4) shows that migration to rural destinations (63 per cent) is more important than that to urban destinations (37 per cent). However, a higher proportion of males migrated to urban areas (44 per cent) compared to females (31 per cent). In fact, migration to urban areas was predominately male, while females tended to dominate the stream to rural areas. It was also found that most intra-state migration (78 per cent) was to rural destinations while migration to other states tended to be to urban destinations (70 per cent). This could be due to the fact that development activities in Pahang during the last decade were concentrated in rural areas, especially in JENGKA and DARA.

5.3.2 Reason for Migration

Several distinct reasons were given for migration from the settlement scheme. Firstly, migration of males was mainly for job related reasons, that is "to take up a job offer" or "to join other rural development projects". Educational reasons were also important, especially for younger migrants who tended to seek further education elsewhere in urban areas. Female migration was mainly for marriage or "to take up a job offer". Educational reasons seemed to be less important for females compared to males (Table 5-5).

Table 5-3: PLACE OF DESTINATION OF OUT-MIGRANTS BY SEX,
KAMPUNG AWAH, 1986

Place of Destination	Male		Female		Total	
	Number	(%)	Number	(%)	Number	(%)
JENGKA Region	30	20.8	41	28.7	71	24.7
Pahang	55	38.2	61	42.7	116	40.4
Johor	9	6.3	2	1.4	11	3.8
Kedah	5	3.5	4	2.8	9	3.1
Kelantan	2	1.4	-	-	2	0.7
Melaka	3	2.1	-	-	3	1.0
Negeri Sembilan	3	2.1	4	2.8	7	2.4
Pulau Pinang	2	1.4	4	2.8	6	2.1
Perak	10	6.9	4	2.8	14	4.9
Selangor	8	5.6	6	4.2	14	4.9
Terengganu	3	2.1	3	2.1	6	2.1
Federal Territory	9	6.3	13	9.1	22	7.7
Sabah	1	0.7	1	0.7	2	0.7
Sarawak	2	1.4	-	-	2	0.7
Others	2	1.4	-	-	2	0.7
Total	144	100.0	143	100.0	287	100.0

Source: Kampung Awah Migration Survey 1986.

Table 5-4: DESTINATION OF OUT-MIGRANTS BY STRATA

Strata	Within Pahang(%)			Other States(%)			Total		
	M	F	T	M	F	T	M	F	T
Urban	27.7	16.7	21.6	71.2	68.4	70.0	44.4	30.7	37.5
Rural	72.3	83.3	78.4	28.8	31.6	30.0	55.6	69.3	62.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	83	102	185	52	38	90	135	140	275*

* 12 missing cases

M male

F female

T total

Source: Kampung Awah Migration Survey 1986.

The cross-tabulation of purpose of migration by type of destination indicated that "to join other rural development projects" and marriage were more important reasons for out-migration to rural areas. Educational reasons were more important for urban destinations, and "to take up a job offer" was important for both rural and urban destinations. The reason for this pattern could be the extensive development of land settlement schemes in rural areas within Pahang state that provide plenty of opportunities for migrants in rural areas. Second, the children of settlers tend to marry other settlers' children. Migration associated with these two factors is mainly within rural areas. On the other hand, facilities for higher education are mainly located in urban areas so those who seek further education migrate to urban areas. Employment opportunities in urban areas are also growing and thus "taking up a job offer" is also an important reason for migration to urban areas.

Table 5-5: REASONS FOR OUT-MIGRATION,
KAMPUNG AWAH 1986

Reasons	Male (%)		Female (%)	
	Urban	Rural	Urban	Rural
On Work Transfer	-	1.3	-	-
To Look For Job	-	1.3	-	-
To Start Job Offer	66.7	53.3	41.9	13.4
Rural Development Project	-	36.0	-	-
Education	28.3	5.3	9.3	1.0
Marriage*	-	-	48.8	83.5
Others	5.0	2.7	-	2.1
Total	100.0	100.0	100.0	100.0
Number **	60	75	43	97

* Includes following husband

** 12 missing cases

Source: Kampung Awah Migration Survey 1986.

5.3.3 Age and Sex

The age of the migrants referred to here is the age at the time of out-migration. It was obtained from the information on present age and the year when their migration from the settlement took place. The distribution of ages at the time of out-migration is shown in Table 5-6. Most of those who moved away did so between ages 15 and 29 years, with the mode lying between ages 20 and 24 years for both males and females. This youthful characteristic is typical of most migrants in Asian countries, where the modal age group is often 20-24 years (Pryor, 1979:323). The study by Blaire and Noor (1980) of the changing of rural life-styles in settlement schemes also parallels this finding. Their analysis of age distribution of settlers' children in settlement schemes indicated that the number of settlers' children residing on the settlement diminished rapidly after age 20. They found that more than 91 per cent of male settlers' children aged 25 and above and more than 75 per cent of female settlers' children aged 25 and above had migrated out.

The survey data show that the total number of male and female migrants was almost the same (Table 5-6), indicating that there was no significant sex differential for out-migration from this settlement scheme. There were some variations in the age-specific sex ratio of migrants, with more females moving out at ages 20-24 and more males at ages 25-29.

Table 5-6: AGE OF OUT MIGRANTS BY SEX, KAMPUNG
AWAH 1986 *

Age	Urban (%)			Rural (%)		
	Male	Female	Total	Male	Female	Total
0-4	-	-	-	1.3	-	0.6
5-9	-	-	-	-	-	-
10-14	10.0	7.0	8.8	2.7	3.1	2.9
15-19	40.0	27.9	35.0	21.3	27.8	25.0
20-24	40.0	55.8	46.6	40.0	46.4	43.6
25-29	10.0	9.3	9.7	22.7	14.4	18.0
30-34	-	-	-	10.7	4.1	7.0
35-39	-	-	-	-	2.1	1.2
40+	-	-	-	1.3	2.1	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number**	60	43	103	75	97	172

* age at the time of migration

** 12 missing cases

Source: Kampung Awah Migration Survey 1986.

When comparing age of out-migrants by rural and urban destination, it is apparent that out-migrants to rural areas tended to be older, although the modal age was similar (20-24). Only 10 per cent of migration to urban areas occurred at age 25 and above while the comparable figure for migration to rural areas was more than 22 per

cent. It is also observed that the sex ratio (males per 100 females) of urban migrants was higher (140) compared to that of rural migrants (77). Thus migrants to urban areas tended to be male, while females tended to migrate within rural areas and over shorter distances than males.

5.3.4 Marital Status

Pryor (1979), in an analysis of marital status of internal migrants in Peninsular Malaysia, found that migrants tended to be single, especially, those aged 20-24. This is particularly true for migrants to Kuala Lumpur and nearby urban areas in Kelang Valley. Young Malay women who have recently moved to cities were mostly single. In rural areas, however, migrants, particularly women, tended to be married (ESCAP, 1982). The marital status of out-migrants in this survey also reflects this characteristic of migrants to rural areas, as 73 per cent and 93 per cent of male and female migrants respectively were married. Female out-migrants to urban areas also tended to be married but the percentage was slightly lower--63 per cent (Table 5-7). The greater proportion of married female migrants is related to marriage as a reason for migration, as mention before. In Malay society it is the norm that the wife moves to the husband's house a few days after marriage, so the marriage related movement of females is apparent.

However male out-migrants to urban areas tended to be single (67 per cent), with most were single during the time of migration, as male migrants normally married after getting a job and 60 per cent had migrated to take up a job. However, those who migrated to become settlers in other settlement schemes most probably were married at the time of migration, since single persons were not eligible to become settlers.

From the above analysis it seems that out-migrants who move to rural areas tend to be married while out-migrants to urban areas, particularly males, tend to be single.

Table 5-7: MARITAL STATUS OF OUT-MIGRANTS,
KAMPUNG AWAH 1986

Marital Status	Male(%)		Female(%)		Total(%)	
	Urban	Rural	Urban	Rural	Male	Female
Single	66.7	26.7	37.2	7.2	44.4	16.4
Married	33.3	73.3	62.8	92.8	55.6	83.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number*	60	75	43	97	135	140

* 12 missing cases

Source: Kampung Awah Migration Survey 1986.

5.3.5 Educational Attainment

A number of studies which relate migration to education in Peninsular Malaysia and Southeast Asia have generally indicated the following.

1. The propensity to migrate increases directly with schooling, and recent migrants tend to be more highly educated than early migrants (Pryor, 1979:325).

2. Migrants tend to be more educated than non-migrants and male migrants are better educated than female migrants (ESCAP, 1982; Pryor 1975:136).

3. Migrants to urban areas are better educated than those to rural areas (ESCAP, 1982; Chan cited in Gosling, 1983).

The survey data indicate that the level of educational attainment of out-migrant settlers' children was higher than that of the non-migrant settlers' children aged 25 and over. The proportions with secondary and tertiary educational attainment were 62 per cent and 42 per cent for out-migrants and non-mover settlers' children respectively (Table 5-8).

In terms of educational attainment by sex, the overall figures indicated that male migrants were better educated than female migrants, with the proportion of males with secondary and tertiary education (69 per cent) being greater than that of females (54 per cent). The level of educational attainment of out-migrants to urban areas tended to be higher than that of those to rural areas. About 67 per cent of out-migrants to urban areas attained secondary and tertiary education levels compared to 59 per cent of those moving to rural areas.

This observation is in fact parallel to the finding of ESCAP (1982) mentioned above, that migrants tend to be more educated than non-migrants. Male migrants were better educated than female migrants and migrants to urban areas were better educated than those to rural areas.

Table 5-8: EDUCATIONAL ATTAINMENT OF OUT-MIGRANTS AND
NON-MIGRANT SETTLERS' CHILDREN, AGE 25 AND ABOVE,
KAMPUNG AWAH 1986

Educational Attainment	Migrants(%)			Non-Migrants(%)	Migrants(%)	
	Male	Female	Total	Total	Urban	Rural
No-Schooling	2.2	-	1.1	-	2.0	0.8
Primary Education	28.3	46.2	37.2	57.9	31.3	40.0
Secondary Education	63.0	52.7	57.9	42.1	58.3	56.9
Tertiary Education*	6.5	1.1	3.8	-	8.3	2.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	92	91	183	19	48	130

* College, university and other post-secondary education.

Source: Kampung Awah Migration Survey 1986.

5.3.6 Employment

Pryor (1975:137) has noted that "...in Peninsular Malaysia migrants tend to be in service occupations or labouring, with professional, technical, and clerical occupations important in Selangor. Agricultural occupations are only significantly associated with mobility within rural areas and have declined in importance over time."

In this study, 78 per cent of females were stated as being not employed and the percentage was higher amongst those who migrated to rural areas (87 per cent). This is closely associated with migration due to marriage. Those women who were employed worked in the service and industrial sectors, especially migrants to urban areas. For male migrants occupations tended to be concentrated in two main sectors, agriculture and services (Table 5-9). The survey indicates that those in the agricultural sector were mainly settlers in FELDA schemes in rural areas in Pahang. The services sector included clerical workers, police, military personnel and teachers. There were more male migrants engaged in the services sector in urban areas (45 per cent) compared to rural male migrants (26 per cent). The percentage of male migrants not employed in urban areas was also high (33 per cent). This could be related to migration due to educational purposes. This finding is, in fact, comparable to the finding of Pryor mentioned above.

5.3.7 Migrants' Return Visits

Most out-migration from this settlement scheme seems to be permanent, except for some cases, such as migration for educational purposes, when some (10 per cent) migrants normally return home during school holidays or after finishing studies. But after a period of time, when a job is offered to those who have finished studies, they migrate permanently. The term "return visit" in this context is not similar to circular migration, since migrants return to the home village only to visit their parents. The frequency of return varies depending on the distance from the place of migration to the settlement scheme. Generally the shorter the distance, the more frequent the return to the parents' home. Table 5-10 shows the frequency of return to Kampung Awah in one

Table 5-9: EMPLOYMENT OF OUT-MIGRANTS BY SEX,
KAMPUNG AWAH 1986

Employment	Male(%)		Female(%)	
	Urban	Rural	Urban	Rural
Agriculture	1.7	46.6	-	-
Manufacturing	1.7	6.8	9.5	-
Electricity, Gas, Water	-	2.7	-	-
Construction	1.7	1.4	-	-
Wholesale, Retail	5.2	4.1	-	-
Transportation	6.9	5.5	2.4	-
Finance	5.2	1.4	-	-
Service	44.8	26.0	31.0	13.4
Not employed	32.8	5.5	57.1	86.6
Total	100.0	100.0	100.0	100.0
Number*	58	73	42	97

* 17 missing cases

Source: Kampung Awah Migration Survey 1986.

year by urban and rural place of destination. Migrants in urban areas tended to return less frequently than migrants in rural areas. More than 50 per cent of urban migrants returned less than five times per year compared to 34 per cent in rural areas. Only 19 per cent of urban migrants return more than 12 times per year compared to 37 per cent for rural migrants. This could be related to distance since most urban migrants were longer distance migrants. Normally those who stayed in JENGKA visited most frequently and spent around one or two hours with their parents having a cup of coffee. Long distance migrants visited mainly during festivals such as 'Hari Raya' (the Muslim celebration of the end of the fasting month) or when the parents, relatives or close neighbours organised a marriage ceremony--'Kenduri'. They normally stayed with their parent for few days and then returned home. This

study did not find any significant differences in return visits between males and females.

Table 5-10: FREQUENCY OF RETURN TO KAMPUNG AWAH

Frequency (per year)	Urban(%)			Rural(%)		
	M	F	T	M	F	T
1-4	56.7	44.2	51.5	32.0	36.1	34.3
5-12	25.0	37.2	30.1	30.7	26.8	28.5
13+	18.3	18.6	18.4	37.3	37.1	37.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number*	60	43	103	75	97	172

* 12 missing cases (unspecified rural or urban destination)

M male

F female

T total

Source: Kampung Awah Migration Survey 1986.

5.3.8 Remittances

The remittances referred to here are amounts of money given by migrants to their parents. They do not include goods received by parents when visited by migrants, which normally is in the form of food such as sugar, milk, flour, coffee and fruit. The information obtained here is rather crude since most respondents do not remember the exact money received and the amount and frequency each year is irregular. This study only refers to the remittances sent in the year prior to the survey. Because of this limitation, the analysis presented here should be considered only as indicative of the remittances from out-migrants to the settlement scheme.

The survey found that only 29 per cent of out-migrants sent money to their parents in the settlement scheme (Table 5-11). Others did not send money, generally because they did not earn extra income and, the evidence on the type of employment and level of education attained by migrants suggests it is most unlikely for them to earn high incomes. Many of them had married, which added to the financial burden on their family. This study shows that more single migrants sent money (34 per cent) than married migrants (27 per cent) and more male migrants remitted money (31 per cent) compared to female migrants (26 per cent).

For those who did send money, the majority sent less than \$M50 per month and most of them were in service occupations. The average remittances sent by each migrants was M\$33 per month. The effects of remittances on settlers' income were significant for those who received them (38 per cent of the settlers). The average monthly income of settlers who received remittances were M\$366 compared to M\$300 for non-receiver. Analysis of remittances by rural and urban destination shows some difference, with 35 per cent of migrants from urban areas sending remittances compared to 25 per cent from rural areas. This could be due to the fact that more urban migrants were single males, working in service occupations and probably earned relatively higher incomes.

Table 5-11: AVERAGE VALUE OF REMITTANCES PER MONTH

Amount(M\$ per month)	Urban(%)	Rural(%)
None	65.0	75.0
1-25	10.7	11.6
26-50	19.4	11.1
51-100	3.9	2.3
101 and above	1.0	0.0
Total	100.0	100.0
Number*	103	172

*12 missing cases

Source: Kampung Awah Migration Survey 1986.

5.4 Out-Migration Trend

The number of out-migrants each year obtained from the survey has been converted to the total for Kampung Awah. The result is shown in Table 5-12. The number of out-migrants increased in each successive period and was quite substantial 15 years after the settlers' entry. Most of the out-migrants were settlers' children. After 15 years the settlers' children who were aged 0-9 at the time of entry were at the peak age of migration (age 20-24). The individual life cycle of the settlers' children appears to be a key concept in explaining the variation in the number of out-migrants at each development stage of the settlement scheme. The sequence of events in the early stages of the life cycle, that potentially could be experienced by all children, and seem to be related to the event of migration, are: the phase of pre-school and primary education, the phase of secondary school under age 18, the phase of tertiary education, entry into the labour force and marriage. However everyone does not necessarily experience all phases since some may jump from the phase of completion of secondary school directly to entry into the labour force or marriage.

In the phase of pre-school and primary education most of the children stay with their family. This was at the beginning of the settlers' entry into the settlement scheme. Primary education facilities are available in the settlement schemes and within the walking distance of most homes. There were very few out-migrations at this stage. In the second phase, that is during secondary education, about 10 years after entry into the settlement, many still stayed with their families. Secondary education facilities are available some distance away from the settlement and in some places in the settlement itself. Daily commuting from home to school is common. Some may have out-migrated to study in school further away or stay in hostels provided by FELDA in Kuantan, Johor Bahru and Kuala Lumpur. Thus some migration occurred among the secondary school age population (ages 13-18). Some bright children may have entered higher institutions, which are mainly located in the cities, and returned to the settlement during holidays. Many completed secondary education, as indicated in the previous section on the educational attainment of the settlers' children. Those who finish secondary education entered the labour force phase. Many stayed at home while applying for jobs and most of these helped their parents in plantation work. This may take a few years, but by age 20-24 many would have obtained jobs elsewhere and migrated. So migration is substantial at this stage, especially for males, about 15 years after settlers' entry.

Many females entered the stage of marriage after finishing secondary education. As they married they move to their husband's home, which was usually not located in the settlement. This was true even when marriage occurs among settlers' children in the same schemes because most husbands were employed elsewhere, thus substantial out-migration of females due to marriage occurred at this stage (Appendix D). Since male migrants usually married only after getting a job, and the job offers were mostly elsewhere (outside the settlement schemes), no migration of males occurred due to marriage.

This examination of the life cycle stages of second generation settlers (settlers children) in relation to development stages or age of

settlement schemes provide some indication of the reason for the trend of out-migration discussed above.

Table 5-12: OUT-MIGRATION FROM KAMPUNG AWAH

Year	Period	Migrants (111 Sample)	Migrants (Total)	Per Year
1963-67	1	9	27	5
1968-72	2	27	81	16
1973-77	3	41	123	25
1978-82	4	111	333	67
1983-86*	5	96	288	91

* 3 years and 2 months

Source: Kampung Awah Migration Survey 1986.

5.5 Conclusion

This study has found that the destination of out-migrants from a settlement scheme in a frontier region tended to be mixed, with more migration occurring within rural areas and covering shorter distances, than migration to urban areas over longer distances. Out migration occurred among settlers children at ages 15-29, most notably ages 20-24 years. Migration to urban areas was dominated by single males, and was for taking up job offers and for educational purposes, while females tended to migrate within rural areas, mostly for marriage. The educational attainment of migrants was higher than that of non-migrant settlers' children. Male migrants tended to have higher education than female migrants, and migrants to urban areas were better educated than migrants to rural areas. Migrants living in urban areas tended to be employed and mainly engaged in the services sector while rural migrants tended to be engaged in agriculture and service occupations, but most of the females in this category were not employed.

The analysis of return visits and remittances indicates the

existence of linkages between area of origin and destination. Migrants, especially short distance movers, visited their parents frequently, but few of them remitted money to their parents.

The findings of this study do not support the presumption that out-migrants from the settlement schemes in frontier regions were mainly urban migrants, since there were substantial numbers of out-migrants, particularly females to rural areas. The presumption is thus valid only for migration of males from the settlement schemes.

CHAPTER 6

SUMMARY AND CONCLUSIONS

6.1 Introduction

This study has examined the implications of development in resource frontier regions, particularly JENGKA and DARA, for migration in Pahang. The basic issues addressed in the study are the inter-relationship of rural development with internal migration and whether development in rural areas (in this case resource frontier regions) can divert migration away from cities to frontier areas.

The subject has been approached with a rather narrow perspective, focussing on land settlement schemes. The reason is that land settlement schemes are one of the major components in the development of resource frontier regions in Peninsular Malaysia, particularly in the study area. In the course of this study a number of factors were examined to establish the main implications of development in the resource frontier region for migration. These aspects include the extent to which development in JENGKA and DARA influenced migration patterns in Pahang, the characteristics of settlers (in-migrants) at the time of entering the land settlements schemes, and the characteristics of out-migrants from the land settlement schemes.

6.2 Summary of Major Findings

Development Impact

1. The development of the resource frontier region (JENGKA and DARA) in Pahang is one of the important strategies of regional development which seeks to enhance socio-economic development in depressed areas, and to reduce rural-to-urban migration, especially migration to the Kuala Lumpur-Kelang Valley region. The development in the region is

agriculturally based, incorporating the development of settlements, supplied with urban type facilities, to form a modern sector of rural development.

2. The study shows a significant impact of development in JENGKA and DARA on migration in Pahang, in which the districts of Temerloh, Jerantut and Rompin, where major development activities of JENGKA and DARA are located, have experienced substantial net inflows of migrants from within Pahang and other states of Peninsular Malaysia.

Characteristics of Settlers (In-migrants)

3. Most of the settlers at the time of migrating to the land settlement schemes in the resource frontier region were aged 25-39, particularly 25-29, with an average family size of 5, and having children aged 0-9.

4. The level of educational attainment among settlers was low, with more than 80 per cent having less than 7 years of primary education and about 10 per cent having no education.

5. Most of the settlers were employed before migrating to the settlement schemes, particularly in agricultural based occupations, with income mostly less than \$M 100 per month.

6. A majority of the settlers migrated because of the opportunities for owning land and other perceived benefits such as housing, facilities and higher incomes.

Characteristics of Out-migrants

7. Substantial out-migration occurred among settlers children (second generation settlers), males and females, during the ages 15-29, most notably aged 20-24.

8. The place of destination of out-migrants tended to be mixed,

with more migration occurring within rural areas and over shorter distances, than movement to urban areas over longer distances.

9. Migration to urban areas was dominated by single males, mostly taking up a job offer or migrating for educational purposes, while females tend to migrate within rural areas, mostly due to marriage.

10. Male out-migrants tended to be more educated than female out-migrants, out-migrants tended to be more educated than non-migrants, and migrants to urban areas were better educated than migrants to rural areas.

11. Most out-migrants to urban areas, particularly males, were employed, and mainly engaged in service occupations, while rural destination migrants, predominately female, were not employed. Of male migrants to rural areas, most were engaged in agricultural and service occupations.

12. Most of the out-migrants did not send money to their families, but visited their families quite frequently, particularly the short distance out-migrants.

6.3 The Prospects for Migration to Cities

In Peninsular Malaysia, rapid urbanization in the Kuala Lumpur-Kelang Valley region, accompanied by problems such as slums, congestion and inadequate social services, had been assumed by policy makers to be the result of migration from rural areas due to inter-regional inequality of social and economic development. The strategies of regional development, such as resource and new land development strategies, in situ rural development strategies, industrial dispersal strategies and rural urbanization strategies, were formulated with one of the main objectives to reduce excessive rural-to-urban migration, especially migration from depressed areas to the already congested core region of Kuala Lumpur-Kelang Valley.

The study suggested that migrants to the resource frontier region

(specifically the settlers) were not potential rural-to-urban migrants and tended overall be induced migrants. The study also found that there was a potential pool of out-migrants among the settlers' children in the frontier regions. Although this study found that out-migrants tended to move short distances and tended to be of a rural type, the limited number of employment opportunities available in JENGKA region could encourage them to migrate elsewhere such as to Kuala Lumpur and Kelang Valley which are not far from the region. The study found that employment related reasons were the main factors for migration to urban areas, which might support the assumption above (migration to the Kuala Lumpur-Kelang Valley region).

Another possibility is inter-frontier region migration from JENGKA to DARA, since more development was expected in the DARA region. However, most of the employment opportunities in DARA were agricultural, which might generate conservative movement between areas with similar conditions. This might not be attractive to the second generation of settlers who attained higher education, were urban oriented and had more potential for upgrading their status.

In order to ensure the strategy of development in the resource frontier regions is an effective tool for reducing migration to the cities there are several courses of action:

1. Create employment opportunities in the resource frontier region, especially non-agricultural based, such as manufacturing and institutional. However in the past it has seemed to be very difficult to attract industrial investors to the region because its location was relatively less strategic compared to other places on the West Coast of Peninsular Malaysia (such as Kuala Lumpur, Selangor and Negeri Sembilan), and the existing industrial zones within Pahang such as Temerloh town, Maran, Bentong and Kuantan. It might perhaps work for certain types of industries such as food manufacturing, agricultural equipment and other local demand oriented industries. Certain incentives could be given, such as allocation of areas for 'free trade zones' and providing necessary infrastructures.

Development of government and semi-government institutions in the region might also be possible, such as a teachers training college, vocational schools, a university branch campus, research institutions, hospitals and others.

2. To re-orientate education and training towards fulfilment of the demand in frontier regions, such as modern agricultural practices among second and future generations of the population. This could be difficult to implement in schools under present educational policies and programs of the Ministry of Education which tend to emphasise general basic education and be urban oriented. Perhaps a separate agricultural institution which caters for school leavers is more feasible.

3. To give priority of employment in frontier region to those living in the area. This may, to a certain extent, prevent potential migrants from going to the cities to search for jobs. However it would restrict the people in other areas, especially the needy, from competing for jobs in the frontier area.

Therefore, policies, designed to reduce rural-to-urban migration must ensure potential rural-to-urban migrants are attracted to the frontier area and must consider how to cater for the second and future generation in the area. They must also include the creation of employment opportunities that suit the needs and aspirations of future generations in the region or ensure that future generations in the region will participate in development activities, such as in DARA where they are agriculturally based.

6.4 Areas for Future Research

Since this study covers only a particular settlement scheme in a frontier region more studies are needed to cover other settlements and new towns in DARA to provide more evidences on migrants characteristics and migration trends in the region. Only then could findings on the implications of regional development for migration be more conclusive.

Another research problem that calls for further studies is how are

developments in frontier regions related to out migration? What are the implications of out-migration for frontier regional development? These might be answered by examining the details of socio-economic determinants and consequences of migration, migration behaviour and relating family and individual life cycles with migration patterns in the frontier region.

Further research might also be directed to establishing what possible measures could enhance opportunities in frontier regions in order to cater for future generations in the region.

6.5 Conclusion

The inter-relationship of migration and regional development is a complex phenomenon which requires comprehensive information and examination, in order to explain the mechanism that generates linkages between migration behaviour and development. This understanding will provide better policy measures to deal with the problems related to population movement. This study thus represents a step towards explaining this inter-relationship and should be continued by further research.

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APPENDIX A
SURVEY QUESTIONNAIRE

KAJIAN CORAK MIGRASI PENDUDUK DI RANCANGAN FELDA KAMPUNG AWAH 1986

A. BORANG ISIRUMAH

1. Nama ketua keluarga : _____ Umur/Jantina ____/____
2. Alamat : _____
3. Bangsa : _____
4. Agama : _____
5. Tempat lahir : _____
6. Tempat tinggal sebelumnya : _____
7. Tahun bermastautin di : _____
rancangan FELDA
8. Pekerjaan di tempat asal : _____
9. Pendapatan di tempat asal : _____
(per bulan)
10. Pekerjaan sekarang : _____
11. Pendapatan sekarang : _____
(per bulan)
12. Bilangan ahli keluarga : _____
semasa berhijrah
13. Senarai ahli keluarga yang ada sekarang

	Nama	Jantina	Umur	Pertalian	Pelajaran	Pekerjaan	Pendapatan
1.	_____	_____	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____	_____	_____

B. BORANG INDIVIDU PENGHIJRAH KELUAR FELDA

1. Nama : _____

2. Jantina : _____
3. Umur : _____
4. Pertalian dengan ketua keluarga: _____
5. Taraf perkahwinan : _____
6. Taraf pelajaran : _____
7. Pekerjaan : _____
8. Tempat berhijrah : _____
9. Tahun berhijrah : _____
10. Tujuan berhijrah : _____
11. Berapa kerap kembali : _____
12. Remittance dan jumlahnya : Ya/tidak _____per bulan/tahun

(ENGLISH TRANSLATION)

A STUDY OF MIGRATION PATTERN IN KAMPUNG AWAH FELDA SCHEME 1986

A. HOUSEHOLD FORM

1. Name of the head of household : _____ Age/Sex ____/____
2. Address : _____
3. Race : _____
4. Religion : _____
5. Place of birth : _____
6. Last previous place of residence: _____
7. Year of entry this scheme : _____
8. Previous employment : _____
9. Income before joining the scheme: _____
(per month)
10. Current employment : _____
11. Current Income(per month) : _____
12. Family size when migrated : _____
13. List of household members at present

	Name	Sex	Age	Relationship	Education attain	Employment	Income
1.	_____	_____	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____	_____	_____

B. INDIVIDUAL OUT-MIGRANTS FORM

1. Name : _____
2. Sex : _____
3. Age : _____
4. Relationship to head of household: _____
5. Marital status : _____
6. Educational Attainment : _____

7. Employment : _____
8. Place of destination : _____
9. Year of migration : _____
10. Reason for migration : _____
11. Frequency of return : _____
12. Remittance and amount : Yes/No.Amount \$____per month/year

APPENDIX B
SOME RELEVANT QUESTIONS OF FELDA SETTLER
CENSUS 1976

1. MAKLUMAT LATAR BELAKANG PENEROKA

1.4 Tarikh lahir HB ____ BL ____ TH ____

1.14 Bilangan anak sekarang

	Tinggal Di Rancangan	Tinggal Di Luar
Lelaki	_____	_____
Perempuan	_____	_____

2. MAKLUMAT MENGENAI SUAMI/ISTERI

2.3 Pelajaran Akademik

		Suami	Isteri
Tiada Bersekolah	(1)		
Rendah 1-3	(2)		
Rendah 4-6	(3)	_____	_____
Tingkatan 1-3	(4)		
Tingkatan 4-5	(5)		
Tingkatan 6 ke atas	(6)		

2.9 Apakah pekerjaan anda sebelum memasuki rancangan?

		Suami	Isteri
Bersawah/Bertani	A		
Bekerja Ladang	B		
Kelapa Sawit		_____	_____
Penoreh Getah	C		

Nelayan	D
Pasukan Keselamatan	E
Berniaga	F
Tiada Pekerjaan	G
Lain-lain (Nyatakan)	H

2.10 Berapakah pendapatan purata dari pekerjaan ini sebulan?

		Suami	Isteri
Tiada	(1)		
\$100 dan kurang	(2)		
\$101-\$200	(3)		
\$201-\$300	(4)	_____	_____
\$301-\$400	(5)		
\$401-\$500	(6)		
\$501 dan lebih	(7)		

APPENDIX D
REASONS FOR OUT-MIGRATION BY PERIODS,
KAMPUNG AWAH

Period (5 years)	Reasons (Number of Migrants)						
	A	B	C	D	E	F	G
1963-67	-	-	2	2	-	4	1
1968-72	-	-	8	5	-	14	-
1973-77	1	-	14	4	3	19	-
1978-82	-	1	53	11	10	35	1
1983-86*	-	-	41	4	15	31	5

* 3 years and 2 months

Source: Kampung Awah Migration Survey 1986.

- A -On work transfer
- B -To look for job
- C -To start job offer
- D -Rural development project
- E -Education
- F -Marriage
- G -Others