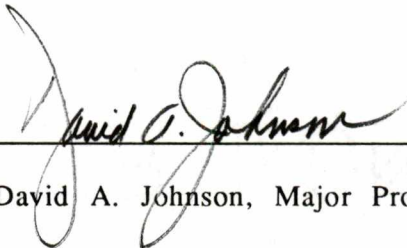


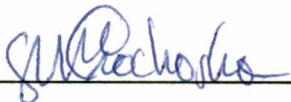
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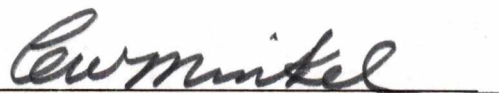
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PLANNING AND DEVELOPMENT OF NEW TOWNS
IN MALAYSIA

A Thesis

Presented for the

Master of Science in Planning

Degree

The University of Tennessee, Knoxville

Hazlina Hamdan

May 1989

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ABSTRACT

Malaysia has adopted a new towns policy to complement the strategy of national development planning which strives to balance the growth of less developed regions, to provide for increased urbanization, to control the growth of metropolitan areas, and to create a pool of labor and consumers sufficient to attract commercial and industrial activities. The intention of this thesis is to formulate an analysis of new towns planning and development in Malaysia as a part of the national development policy, which has played a role influencing the spatial development and growth pattern of the country, and which has had an impact on the specific objectives of the New Economic Policy (NEP). A literature review and a statistical analysis are the two approaches undertaken to conduct the analyses of progress achieved by the new towns and their role in the nation's urban development practices. Throughout the following chapters, the findings reveal that the extensive building of new towns does not contribute significantly to the increased number of urban areas, which in turn does not have an effect on the growth and spatial distribution of urban development. The development of new towns provides only a very marginal impact on the reduction of regional imbalances. In terms of restructuring the society through new towns, the progress achieved by the new towns was relatively below expectations. The slow growth of population in the new towns in either rural or urban areas has affected their physical development. In many cases, the new towns were only half built, which

definitely restrained the progress of other social and economic developments. This study looks into several aspects of new towns development which are based upon the target of the national development. The major conclusion of the study is that the current practice of new towns has failed to attract the necessary intended population. The progress achieved with respect to urban and regional development strategy is in the right direction, but analyses indicate that much more still needs to be done to foster growth within the new towns.

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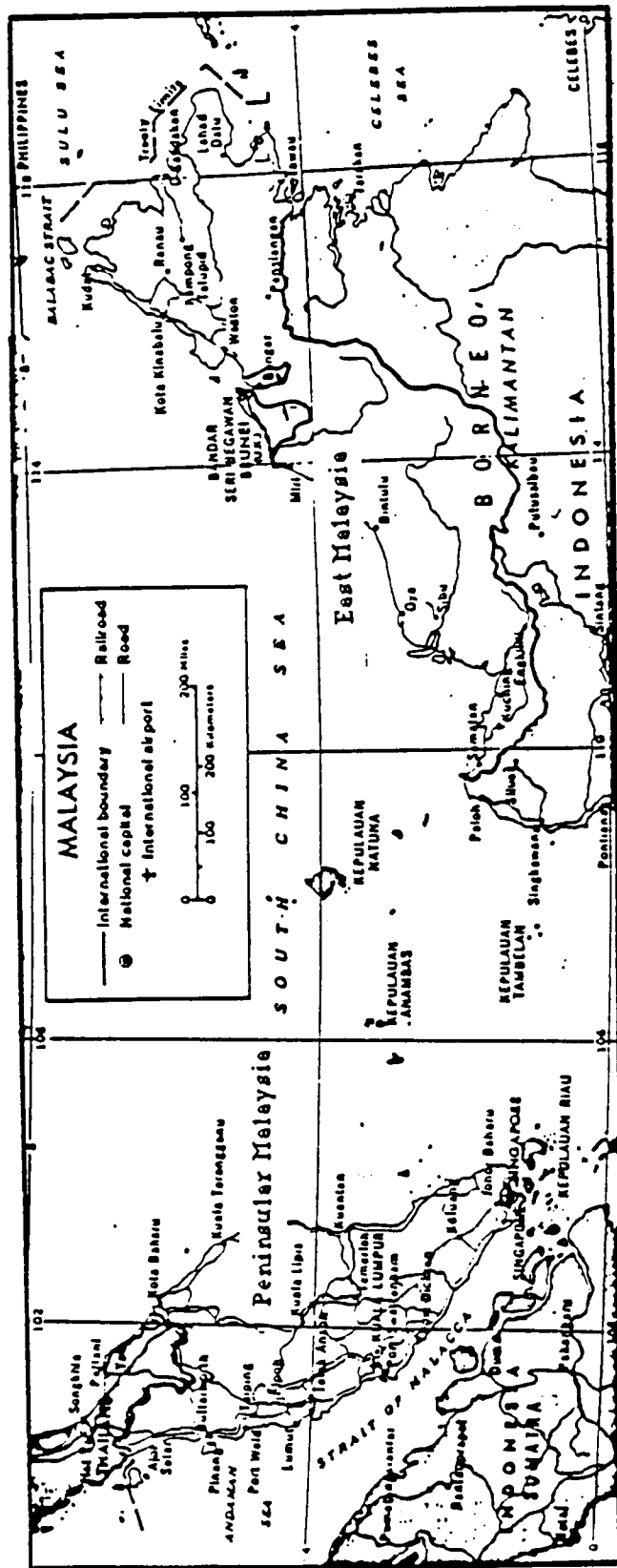
CHAPTER 1

INTRODUCTION

Study Area

Malaysia, a country slightly larger than New Mexico, is located in Southeast Asia. The country is divided into two parts. (Figure 1.1) On the Malay Peninsula to the west is Peninsular Malaysia which borders Thailand to the north and Singapore to the south. Peninsular Malaysia is comprised of 12 states, which include Kuala Lumpur, the Federal Territory, as the capital city. In 1980, Peninsular Malaysia had a relatively small population, 9 million people distributed over 51,000 sq miles. The area is 20 percent cultivated, more than 50 percent forested, and only 1 percent can be termed "urbanized". (Amato, 1982, p.259) The other part of Malaysia is East Malaysia, separated from Peninsular Malaysia by the South China Sea and located on the Island of Borneo, neighboring with Indonesia. This part of the country consists of two states, Sabah and Sarawak, which became states of Malaysia in 1963. Sabah and Sarawak are mostly covered by tropical jungle. The population is concentrated near riverine or coastal areas where villages and major cities and towns are located. East Malaysia is still largely rural in character because there was not much development in this part of the country until recently. Together, the two parts of Malaysia contained 15.7 million people in 1985.

The outstanding characteristic of Malaysia's population today is its highly variegated ethnic mix. The multi-ethnic society character of



Source: Encyclopedia of The Third World, Vol II, 1987.

Figure 1.1. Location of Malaysia.

Malaysia's population has come into being over the course of the last 150 years. There are three major ethnic groups: Malays (which includes other Bumiputera), Chinese, and Indians. The Malays are the largest ethnic group and they make up about 56 percent of the total population. The Chinese are next with 33 percent, then the Indians with 10 percent, and others, 1 percent.

This thesis focuses only on Peninsular Malaysia. As mentioned, East Malaysia only recently became a part of Malaysia in 1963, thus has not been developed relative to Peninsular Malaysia. Furthermore, the new towns which are the subject of the thesis are only being developed in Peninsular Malaysia. The administration of planning and development in Sabah and Sarawak is also different from that of Peninsular Malaysia. This study looks at urban development in Peninsular Malaysia, specifically new towns planning and development.

Purpose of Study

The purpose for conducting the research is primarily to evaluate new towns development policy in Malaysia. New towns have been one of the components of urban and regional development strategy. The reason for the study is the need to recognize the impact of new towns planning and development on national development policy. The study will analyze the extent and effectiveness of new town policy in achieving the specified strategies of urban and regional development.

Methodology

The thesis is in the form of description and evaluation. The research consist first of a review of the literature and evaluation of the policies, and of past and current new town practices.

The second method is a statistical evaluation. Throughout the thesis, statistical analysis are used, primarily frequencies distributions. It is used to evaluate past and present growth trends, and changes in development over time. The qualitative and quantitative approaches used are in response to the need to evaluate progress of new towns within the context of the nation's urban development policy.

The data for the study are drawn from library research. The main sources of data are derived from the secondary and tertiary. Primarily, the five-year Malaysia Plans, the 1980 census, working papers, government publications, journals, and books are the source of the data. Because the new town policy is relatively recent, data are primarily post 1980.

CHAPTER II

LITERATURE REVIEW

Thousands of new towns have been built. It is impossible to keep track of the number of new towns that have been constructed since the idea emerged early in the century. New towns have captured the interests of both capitalist and socialist society for a variety of reasons. Commonly new towns have been seen as a solution to urban problems.

Origin and Evolution of New Towns

The term 'new town' is an old concept. People have planned and constructed new urban settlements since the rise of civilization. New urban settlements have come into being throughout human history, many spontaneously (organic growth of villages) and many by deliberate "plantations". (Whittick, 1974 p.730-731) Many new urban settlements such as Babylon in ancient Mesopotamia, Mohenjo-Daro in the Indus Valley, and new urban centers during the medieval and renaissance period were developed for specific economic, social, political, religion, and defensive reasons. Many early new towns have become a subject of interest for the understanding of urban development.

The modern new town concept began with Sir Ebenezer Howard's proposal of the "garden city". His book entitled "Tomorrow: A Peaceful Path to Real Reform" published in 1898 marked the beginning of the modern new town movement. The basic concept of the garden city as

described by Howard in writing dealt with the problems of London. The garden cities concept proposed "to solve the industrial slum problems of the western world through the creation of small self-sufficient garden cities of finite population, surrounded by greenbelts of publicly held land permanently committed to agriculture, thus precluding urban expansion and elimination of speculative land costs." (So, 1979, p. 31) To Howard, the new town was the way to escape from congestion and social evils of urban life in Britain at the turn of the century. (Schaffer, 1972, p. 11) He saw the new town as a complete social and functional structure with sufficient industry to make it self-supporting, spaciouly laid out to give light, air, and gracious living surrounded by a greenbelt that would provide both farm produce for the population and opportunity for recreation and relaxation. (Schaffer, 1972, p.11) The new town idea was basically concerned with the healthy living environment which has been stressed during the early twentieth century because of the haphazard conditions, pollution, and inadequate infrastructure which existed in cities.

As a result of the garden cities movement led by Howard and his disciples, the first new town was created at Letchworth, England in 1903, followed by Welwyn Garden City in 1919. The purpose was to provide an alternative to the overgrowth, congestion, and suburban sprawl of London. Both towns followed the principles of Howard's garden city idea. Although both of the new towns were a success, it was not until the Second World War that Great Britain embarked on a governmental new towns policy. A national policy on new towns in Britain was proposed by the government-

appointed Reith Committee, generally regarded as responsible for the adoption of the New Towns Act of 1946, which authorized an extensive program of planning and building new towns. (Robson, 1967, p.168)

The New Towns Act of 1946 set forth four essential features to control the development of the new town and also to establish policy ensuring the success of the new towns. "First, the act enables the new town committee to make the initial decision to establish a new town and to propose an area of land that the minister considers suitable for the purpose.... Second, the act requires the minister to appoint a development corporation to plan and build the new towns. Third, the effect of the minister's designation order is to bring into operation all the powers of the New Town Act which include in particular the power for the development corporation to buy land in the area, compulsory if need be, as when it is required to carry out the building of new town. Fourth, the act placed on the government the responsibility for providing all funds needed by the development corporations." (Golany, 1978, p.15) With the adoption of the act, the British Government became very active in constructing new towns. Several other related new town acts were also adopted following the 1946 act, each with changes in the policy regarding specific aspects of the new towns. Since 1946, thirty-four new towns have been constructed throughout Britain with the most extensive period during the late 1940s and early 1950s.

The new towns built in Britain can be categorized in two groups-- Mark I and Mark II new towns. Mark I new towns were all designated between 1946 and 1950 and divided into two classifications. Many

new towns categorized into the first group were intended to provide for the orderly decentralization of population, and jobs from the urban agglomerations. (Clawson and Hall, 1973, p.202) The second classification of new towns was designated to aid regional development such as Glenrothes in Scotland and Peterlee in northeast England. The Mark II towns, which cover the period between 1960 to the present, were also designed to provide for the overspill problems of large cities and help promote the economy in declining areas. The Mark I and II new towns differed in the way when they were constructed and in location and size. (Clawson and Hall, 1973, p. 204) Mark II new towns have typically been constructed further away from the city and are of much larger size to ensure independence from existing urban areas such as Milton Keynes and Northhampton.

Britain's new town planning and its success in implementing these new towns, at least during the 1950s, can be regarded as significant for the establishment of a organizational structures with an adequate budget and the necessary statutory authority. (Osborn and Whittick, 1977) However, later, some failings began to emerge including the neglect of external transport links and the weakness of public transport, the inadequacy of community facilities and social support systems, the failure to build up the tertiary sector of industry, and the lack of social integration between higher and lower class people. (Ramsay, 1986, p.91) Over all, the British new towns program have fulfilled certain urban planning goals. Over 1 million people had been housed in new towns between 1947 and 1978. In 1947 the population of Great Britain was 49 million and in 1978 about 55.8 million,

which indicates an increase of 6.8 million. As a result of the new town legislation, 14.7 percent of the total population growth during that period was housed in new towns. (Turner, 1980, p.46) Many consider the new towns progress a success, and see the program as an effective, concerted operation, backed by successive administrations for over 30 years.

New Town Characteristics

British new town practices have provided many examples for others to follow. The success or failure of new towns will depends on a variety of factors. Certain characteristics have always been associated with new towns. The principles of new town as practiced by the British can be summarized in the following terms: public or unified land ownership; public as main developer; sound economic base with self-contained and self-sustained community; place of work close to place of residence; confined greenbelt and intersecting greenspace; balanced community with neighborhood unit; site selection consideration; independent of any major metropolitan center; provision of all requirements of day-to-day living; urban design form; and strong planning control. (Golany, 1984, p.379 and Robinson, 1973, p.3)

As a form of planned urban growth, self-containment and balanced community are a distinct characteristics of new towns today. In fact this characteristics of new towns is the differences which distinguish new towns from other urban development forms. Self-containment has often been one of the key variables in planning and classifying new towns.

The underlying objective of achieving self-containment has been used as a criteria for the success or failure of new towns. A major aspect of self-containment is the provision of a variety of employment opportunities to enable residents to live and work in the new town. (Cresswell and Thomas, 1972, p.382) This notion of self-containment was a guiding principal of early new town development. The self-containment concept refers to a complete range of urban facilities, that is sufficient employment, shopping, health, education, and other public facilities needed to accommodate the new town's residents.

Self-containment has many facets or dimensions. For a new town to be self-contained, the employment base has to be located in the town so that commuting can be reduced. To attract people to stay in the new town, the provision of housing and services, which includes shopping facilities, schools, hospitals, offices, and other amenities, have to be equal to the sized of the population. In other words, there must be a balancing of jobs provided with the skills of residents, and a full range of personal and social services relative to the number of residences in the community.

Many authors who have written about the self-containment aspect of new towns argue that complete self-containment cannot exist. According to Gideon Golany, the degree of independence or self-containment is an important characteristic of a new town. "The ideal degree differs among cultures depending on consumer standards in each society. In practice, self-containment requires not only careful planning but also highly coordinated implementation. This is especially important to

meet the goal of providing a place of work close to a place of residence and thus minimizing commuting and maximizing the self-sufficiency of a new town." (Golany, 1976, p.129) The cooperation between both the private and public sectors who are responsible for developing the town is essential to ensure the highest degree of self-containment and sound economic condition for the community.

Closely related to the self-containment concept is the notion of a balanced community. The concept of balance has been part of the new town ideology for quite some time. The objective of a balanced community include diversification of industry and dwellings, balanced physical development, and a balance in population heterogeneity with respect to age, occupation, income, ethnicity, and class. (Robinson, 1973, p.17) The idea of balanced community is more complex than the concept of self-containment because in order for the planned new town to achieve a socially and economically balanced society, there must be an integration of activity with people who live in the town. Balance for the new town relates to three main components. First, the level of population should be supported by a roughly equivalent level of employment. Second, the structure of employment should not be dominated by a single type of industry. Third, the population composition of the town should represent all classes: old and young, low and high income people, and professionals and low skills workers. (Cresswell and Thomas, 1972, p.66-68) The first two components are eventually bound to be achieved as the new town matures but the latter component of balance, social balance, often does not reflect an equal distribution. Studies of British

new towns experiences have revealed a tendency to accommodate a particular class of society. New towns in Britain have big surpluses of middle and high income workers and deficits in lower income workers. In other words, many of the new towns only responded to one class, that is the professional and executive middle class. This pattern of living conditions is attributed to the types of jobs being offered. "The sort of growth industry that has been attracted to many of the new towns typically has high proportions of skilled and professional workers." (Clawson and Hall, 1973, p.209-210) Similar experiences also occur in the United States where new communities have been largely occupied by middle class white people rather than lower income people, especially lower income black people.

The planning and development of new towns do not always put traditional principles into practice. Ideas have changed or have modified over time with respect to the characteristics and concepts of a new town. It has often been assumed that new towns will be publicly developed, but there is no reason why the private sector could not be given responsibility for developing new towns. New communities in the United States have often been privately developed. The need to provide good physical living conditions was emphasized in many new towns development in the post war period, especially in Britain. However, by 1960s, many point out that the emphasis had shifted from physical to more social development, with more concern for making available to residents a variety of services and other opportunities. (Phillips and Yeh, 1987, p.8) The question of optimum size of a new town is another factor affecting the way new towns are developed.

The original concept called for a limitation on both numbers and sizes of new towns. Pioneers envisioned relatively small new town with population of approximately 32,000 inhabitants. This size is however not practical. Many new towns have been planned for larger population due to the fact that the smaller size new towns will at one time or another suffer economic disadvantages. Among the disadvantages are:

1. The possibility not to be industrially diversified, dominated by one or two major industries, and because of that economic instability might occur.
2. A reluctance on the part of some firms to establish themselves in small sized communities that have not yet gained any status or prestige because of limited man power, and lack of ancillary services.
3. A high risk of instability and limited adaptability where a declining firm can be a disaster, and new firms are less likely to develop because of sparceness of linkages.
4. Small towns tend to have a larger than average sized industrial plant, becoming a one-company town with absentee ownership and all the attendant problems associated with it.
5. Small towns cannot provide industrial agglomeration economies for self-sustaining growth.
6. Small towns have the difficulty of providing a wide variety of public services or facilities. (Robinson, 1973, p. 6-7)

Because of these drawbacks, new towns today are larger than what had been planned earlier. There is no ideal optimum size for a new town, but for a town to exist, size is dependent on several factors such as composition of population and economic activities, geographic setting, accessibility, and relationship to other town and cities within the surrounding region.

In addition, the idea of independent new towns is questionable. "Few new towns anywhere have become totally independent and many are in effect satellite towns, suburbs, or dormitories." (Phillips and Yeh, 1987, p. 9) The peripheral or satellite cities adjoining middle sized metropolitan areas and the expansion of existing cities into larger new towns are some of the variants on the new towns idea. Another program related to the new towns development is the creation of large residential communities with community facilities and sometimes employment opportunities within existing urban areas. This type of development is known as the new town-in-town. The new town-in-town can be defined as a "major development within or adjacent to existing cities on vacant land or land requiring limited redevelopment, whose purposes are to revitalize existing urban centers, stabilize surrounding neighborhoods, and provide a wide range of housing within easy access of employment, commercial, recreational, cultural, and other facilities and amenities within such urban centers."(U.S. Department of Housing and Urban Development, 1981, p.6) Such programs mostly have been implemented in the United States.

New Towns in Developing Countries

New towns in a modern context provide greater flexibility in response to the changing socioeconomic circumstances. Changes in the original ideas have been made to accommodate a variety of objectives and national policies. New towns have been built and are being developed around the world for variety of reasons. Countries are attracted to invest in new towns because in several ways new towns could contribute to solving

urban problems. The value of new town in terms of international perspectives can be viewed as:

1. an answer to 'megapolis', or the excessive concentration of people and economic activities within great cities or conurbations. New towns offer some solution to the problems of massive urbanization by recognizing the gravity of the unwanted social consequences of economic progress and seeks to revitalize human activity and civic values through a better ordering of spatial relationship.
2. ways of organizing the vast volume of new development which will occur anyhow, along more beneficial lines. Most new development is occurring in the edges of cities or within expanding zones of new urban growth. With the new town, urban growth could be organized and substantial savings over the use of land and provision of economic advantages can be enhanced.
3. an instrument for regional development. The major concern here is to stimulate growth within lagging regions. New towns in this aspect stress as an aim the closing of the growth and income gap among various regions for the stabilization of the backward areas and slowing down the impoverishment process within the rural areas. (Self, 1972, p.2-6 and Shachar, 1973, p.37).

Planning and building new towns in developing countries is not a new phenomena. New settlements have been built in the Third World countries since colonization. New towns travelled across the developing countries at the same time as Great Britain and other western countries saw the benefits of new towns as one of the solution to urban problems. Even though the post war period witnessed the emergence of new towns in many developing countries, the significance of new town development has been more widely accepted in the 1960s and 1970s. Adapted to different circumstances and fast changing condition, new towns in Third World

countries are a "fertile laboratory of ideas for future urbanization policies, development strategies, and settlement planning". (Blair, 1984, p.20)

The prospects of new town development in the Third World seemed appropriate when many such countries were faced with the challenge of urban growth. Some of the common characteristics of the developing countries which directly or indirectly have influence the development of new towns includes: extremely rapid population growth accompanied by rapid urbanization; inadequate infrastructure; regional imbalance; need of labor intensive industry; and low per capita income and extremes of wealth and poverty. Even where new towns have been developed in individual countries, there are political and socioeconomic reasons why they (new towns) can help modify some of the conditions which exist in the Third World. Among the political factors for adopting the new town policy in the Third World are;

1. the desire for a physical symbol for a new nation, or a new region (example of Ankara in Turkey and Brasilia in Brazil).
2. the search for a solution to the problems of existing cities. In many countries, a few cities have grown rapidly into multi-million metropolises, with inadequate services and layouts, and enormous problems of congestion, pollution, and living conditions....Building new towns may be seen as an easier solution.
3. the promotion of regional development areas....The building of new towns in this context is often associated with growth pole strategies.
4. the building of new towns in association with colonization strategies where new settlements are a tool to settle and obtain control over new territories.(Healy, 1987, p.163)

Nevertheless, Third World countries may also be encouraged to turn to new towns for economic reasons:

1. the need to provide for massively increasing demands for urban space consequent upon large scale rural-urban migrations and economic development.
2. the need to provide for workers' housing in a more appropriate form than the barracks which are often associated with resource exploitation by internal companies and colonial powers.
3. the search for economies in the provision of infrastructure and the belief that large scale coordinated infrastructure projects could be more efficient than constant upgrading of inadequate systems in existing cities.
4. the rising costs of congestion in existing cities, as reflected in travel to work times where transport systems have not caught up with rapid urban growth, and also as reflected in rising values, and hence rising costs for industrial land and for housing.
5. as an approach to volume housing provision by house-building firms. (Healy, 1987, p.124)

New towns can be categorized as a new capital city type of new towns; regional development new towns which serve as regional growth centers or resource base centers; overspill new towns, specifically related to satellite city and suburban new town; workers' towns; and colonization new towns. (Healy, 1987, p.126)

The success or failure of new towns in developing countries varies from one country to the other. Some countries are relatively new in developing new towns while others have longer experiences. Many countries that have adopted the new town ideas have encountered different problems and have different levels of success. Many studies have been done

to look at the progress of new towns in developing countries. Such studies were typically concerned with how applicable the new town principles are in these countries as well as whether the new towns really contribute to the achievement of desired goals and objectives.

Many new town projects have been implemented in Asia. Countries within the east and southeast Asia region have built new towns, especially in the 1960's and 1970's. Based on recent research, "experience has shown that new towns are expensive to develop. Different land acquisition methods have had to be used in overcoming the problems of obtaining land and financing development. New towns have been developed on the whole without coherent urban policies, which has often led to mismatch of employment opportunities and social facilities with population growth in the new towns." (Phillips and Yeh, 1987, p.18) Therefore, as a result, many new towns remained dependent for jobs and services on the main urban area, putting pressure both on the new town and the existing city. Examples of such new town development are new towns in the city-states of Singapore and Hongkong. Commuting to employment locations requires good transport linkages, but these have lagged behind the physical growth of the new towns. (Phillips and Yeh, 1987, p.18) New town serving as a regional growth center or resource base center, located in rural area often are without any problems or difficulties. The question is whether or not this type of development will bring about changes in national policy. One of the major issues regarding the development of declining areas is how

to attract industries and people when they are more likely to migrate to a larger city.

Financial concerns have always been one of the major problems experienced by many countries when building new towns. New town projects consume large amounts of capital which in most parts of the developing world is in short supply. Political instability and severe pressure in local economies prevailing within the particular country tend to effect the cost of financing such a project. Because of this, many new towns are very slow in the development progress and have not met specific target dates. Moreover, because lack of understanding of physical and social conditions prevailing in the particular country, the direct application of the new town idea has often exacerbated existing socioeconomic problems.

Conclusion

Today many western countries have stopped building new towns. The idea is still around and is capturing much interest in Third World countries. With the growing attention to new towns, it is expected that they will have a place in the urban development process of the Third World. Although the idea of a new town is simple to grasp, the implementation sometimes imposed difficulties. For developing countries, even though the earlier experiment with new towns has been in terms of new capital cities and colonial new towns, in the past two decades the change in emphasis has been geared towards accelerating urbanization and developing rural areas and their economy. Based on the number of new towns in the developing countries, it

is apparent that new towns have been accepted in this part of the world. In order to ensure success, there is a need for constant modification and adjustment as the new town is transferred to countries with unique social, economic, political, and cultural differences.

CHAPTER III

NEW TOWNS IN THE CONTEXT OF NATIONAL DEVELOPMENT POLICY

This chapter discusses new towns in the context of Malaysian national development policy. The new town has been adopted by the Malaysian government as a part of the comprehensive national urbanization strategy. The chapter is organized in three sections. The first section deals with urbanization history in Malaysia and how the process has influenced the settlement and distribution of urban centers. The second section is a discussion of the New Economic Policy and how this policy is being translated into a spatial development strategy which incorporates the new towns approach in the context of regional development planning. Finally, the last section describes the new town movement in Malaysia.

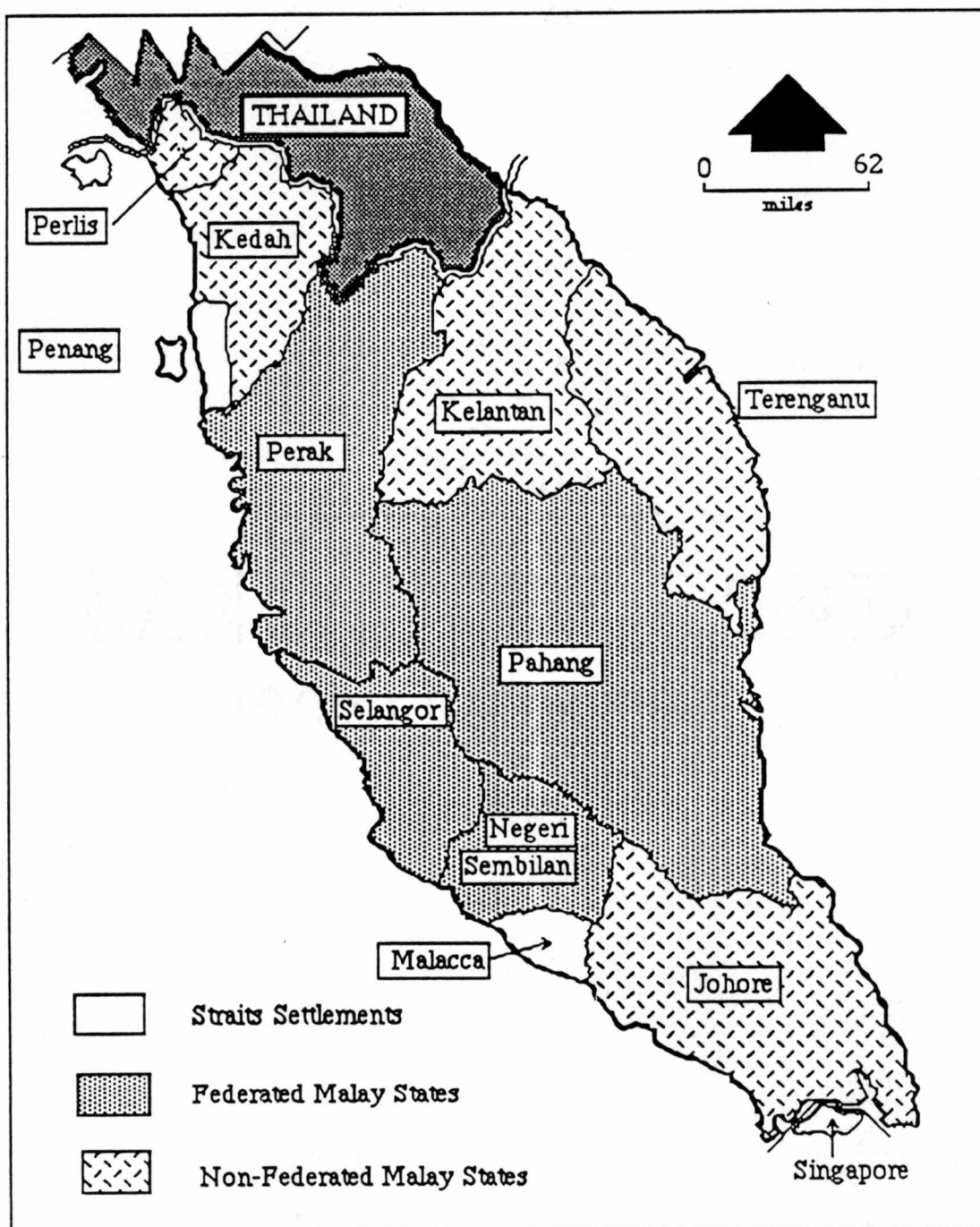
Historical Perspectives of Urbanization

The process of urbanization that took place in this country can be traced back long before the country's independence. In order to describe the chronology of urbanization in Malaysia, it is necessary to include the historical view of urban development in three phases. The urban growth can be phased into : (1). pre-colonial era (prior to 1874); (2). colonial era (1874 -1957); and (3). post war era (1957 to present).

Pre-Colonial Era.

The pre-colonial era is said to have begun before the arrival of colonialists in the 16th century. During the pre-colonial period, Malaya (Malaysia was known as Malaya before 1963) was the trading place for merchants travelling to the Southeast Asia. In the early years, the concept of urbanization was strictly related to the phenomena of population concentration in one locality with an administrative center to monitor the trading of goods. (Dahlan, 1983, p.97) The existence of small villages began when there were commodity exchanges between two or more nearby settlements. Trading of local products took place among the settlements as well as by export through merchants. As a result of tradings, several settlements grew to a larger town. Those early towns were generally located on coastal areas. The earliest urban areas identified during the pre-colonial period were located in three states - Malacca, Penang, and Singapore. These were centers for trading and ports of entry to Malaya.

As the colonials began exploring Southeast Asia, Malaya was colonized by the Portugese (1511-1641), then the Dutch (1641-1786), and finally the British (1786-1957). During the Portugese and Dutch colonization, the importance of Malacca and Singapore was significant because they became the colonial's military base and administration center. When the British ruled Malaya, they took over the existing towns of Penang, Malacca, and Singapore, which were called the Straits Settlements (Figure 3.1). The concentration of British power within these states indirectly



Source: Author, 1989.

Figure 3.1. Malay Peninsula States and Straits Settlements

transformed the cities in Penang, Malacca, and Singapore to urban centers to serve as a crown colonies.

Colonial Era

The period between 1874 to 1957, saw many changes in the urbanization process in Malaya. The British are said to have had the largest influence when compared to the other two colonial predecessors in shaping the growth pattern of cities and towns. Urban development first took place within the Straits Settlements which are a port of entry and centers for trade and commerce. The British emphasized the growth of Straits Settlements in order to establish economic linkages with other Malay States. During the early nineteenth century the relationship of Straits Settlements and the Malay States consisted of the purchase of the Malay States products and the export to the Straits of the manufactured goods and foodstuffs which their simple economies could absorb. (Gullick, 1981, p.23)

By the mid-nineteenth century, many western countries had already become industrialized. Malaya at this time was primarily engaged in the small scale production of tin. As the demands of western industrialized countries for tin expanded, the British were very interested in exploring the inlands for further extraction of tin deposits to export it to western countries. Tin mines were largely found in what was to be called the Federated Malay States of Perak, Selangor, and Negeri Sembilan (Figure 3.1). These three states and later the Federated Malay States of Pahang became British territory. As the result of economic opportunities within Federated

Malay states specifically involving tin deposits, many urban types of settlements were established. By this time, the colonials has also formed large plantations for production of food and agriculture products. They owned plantations for pepper, gambier, sugar cane, coffee, etc. When rubber became popular, Britain introduced rubber which became Malaya's major export. Later, coconut palm trees were brought into the Malayan economy. With the provision of infrastructure along with manufacturing activities, many urban settlements were expanded to provide for a growing economy. The urban activities were basically concentrated in the western states of Malaya because this is where the most productive areas were located. The Non-Federated Malay States, in contrast, lacking significant economic resources and strongly anti-British colonialism, experience far less economic growth.

During the colonial period, immigrants played a vital role in urban areas. Both the Chinese and Indians settled in Malaya prior to the arrival of the British. They were among the early merchants during the 16th century. It was during the colonial era that large scale migration was significant. As the British began exploring the economic opportunities in Malaya, they brought laborers from India to work on plantations. The Chinese merchants also started importing laborers from China to work in tin mines. At first, these immigrants worked as temporary laborers, but due to economic opportunities they decided to stay permanently. The British and the Chinese merchants who were responsible for bringing immigrants settled the laborers in more urbanized areas. In contrast, the Malays who

had settled much earlier and already owned parcels of lands were not particularly interested in urban economies. In addition, because they were anti-British, they were restricted from migrating to urban places and forced to continue living in rural areas and engaged in agriculture activities. This is the reason why the urban areas have been largely occupied by the Chinese, Indians, and Europeans, not the Malays.

Even though the Malays made up about 90 percent of the population in Malaya by 1800, the number of non-Malays had been increasing (Gullick, 1969, p.74). The Chinese migration to Malaya had been motivated by economic reasons. The population growth of Chinese within the tin mine areas of Klang Valley in Selangor and Kinta Valley in Perak continued until they outnumbered the existing population. Chinese migration to the urban areas during the period of 1881-1900 totalled 1,681,711 people (Ooi, 1963, p.110). Although the development of tin mines gave the impetus for the Chinese migrations, the interests of later migrants expanded to cover a variety of activities which included commercial activities and rubber cultivations. Indians were closely linked with agricultural development. In addition to demand for laborers in agriculture enterprises, Indians were also brought in to help in the construction of railways and roads. By 1891, the Indians had increased to about 74,104 people. When rubber was introduced, many Indian populations were working in estates as hard labors. Table 3.1. shows the growth of the Chinese and the Indians in Malaya between 1871 and 1941. This table indicates that both of the non-Malay groups had substantially effected the population

distribution of Malaya. These groups were being located primarily within the urban areas in the states of Selangor, Perak, Penang, and Negeri sembilan. There was little overlapping in the location of the immigrants

Table 3.1. Chinese and Indian Population in Malaya (1871-1941)

Year	Chinese		Indian		Total Population
	#	%	#	%	
1871*	104,615	34	33,390	11	308,097
1891**	391,418	43	74,081	8	910,123
1901	583,396	48	115,530	9	1,227,195
1911	914,143	35	267,159	10	2,644,489
1921	1,170,551	36	471,536	15	3,338,545
1931	1,703,528	39	621,774	14	4,345,503
1941	2,418,615	44	767,693	14	5,545,173

* Straits Settlements only.

** Straits Settlements and Federated Malay States only.

Source: Ooi Jin-Bee. Land, People and Economy in Malaya, 1963

and the Malays due to their different economic interests. The settlement patterns showed that the immigrants were more likely to be settled in the urban centers and in tin and rubber belt areas. On the other hand Malays were on coastal and riverine lands associated with their padi and fishing economy. Due to the separation of ethnic groups, not only the racial composition had been segregated, but also the level of urbanization was affected. According to Table 3.2, the non-Malays were more urbanized and had a higher percentage of total population in urban areas. Whereas the

Malays had a lower percentage of urban population compared to the total population. This implies that the Malays were the least urbanized.

Table 3.2. Degree of Urbanization by Race in
Peninsular Malaysia, 1947 -1970

Race	1947		1957		1970	
	Total Pop. (000)	Percent Urbanized	Total Pop. (000)	Percent Urbanized	Total Pop. (000)	Percent Urbanized
Malays	2,427	7.3	3,126	11.2	4,685	14.9
Chinese	1,885	31.1	2,334	44.7	3,123	47.4
Indians	535	25.8	696	30.6	932	34.7
Others	76	46.2	124	49.3	70	40.8

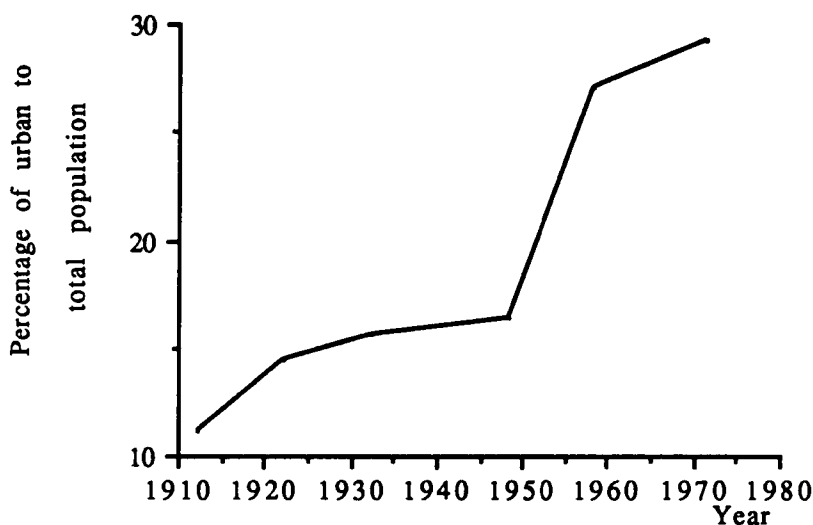
Source: Ooi Jin-Bee. "Urbanization and the Urban Population in Peninsular Malaysia," Journal of Tropical Geography, June 1975.

The colonial era thus accelerated the process of urban development in Malaya. There were three forces during this era which encouraged the urbanization process. First, was the increasing role of the commercial sectors involved in export-related industries; second, was the large scale production in agriculture through plantations; and finally, the opening up of tin deposits. All three factors, in addition to increasing the power of the colonials to exploit the economic opportunities, resulted in the creation of new urban centers and the expansion of those already in existence.

Post Independence Era

Peninsular Malaysia experienced a steady increase in the level of urbanization prior to 1947. But during the post-war period, the process of urban development accelerated. The percentage of urban to total population has increased significantly after the war as shown in Figure 3.2. The increase in urban population is not just related to an increase in the number of urban centers (by 1970 there were 49 urban areas with population of

Figure 3.2. Peninsular Malaysia- Urban Growth, 1910-1980

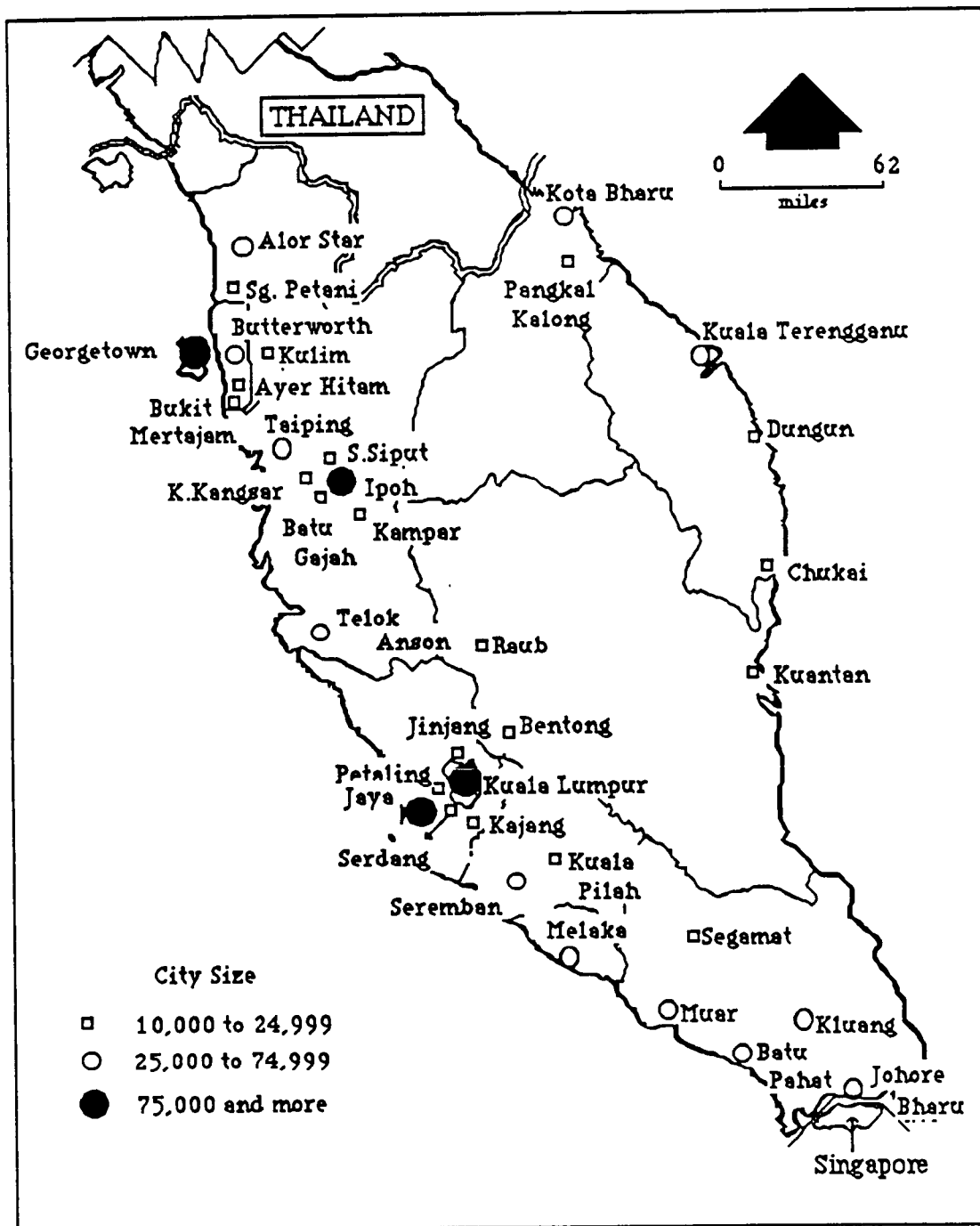


Source: Ooi Jin-Bee, *Journal of Tropical Geography*, June 1975

10,000 or more) but also closely associated with political and social forces. A sudden increase in the urban population between 1947 and 1957 was attributed to the massive urban movement following the Second World War which was the result of the emergency period declared by the government in 1948. During this period, there was an insurgency led by the Communist

forces against the colonial government. (Hirschman, 1976, p. 447) To deny the Communist insurgents a potential base of support, the government adopted a resettlement program requiring the rural residents to move into new villages and other urban areas. These new villages were new settlements located adjacent to existing towns which later on became part of the town or grew into a new community. Increasing urban opportunities also encouraged the migration of rural people to the urban areas. The movement of the rural people between 1948 and 1957, especially to the already urbanized areas had the effect of increasing the urban population and adding to the number of urban centers. Figure 3.3 shows the distribution of urban areas in 1957 which indicates where the bulk of the population was concentrated. This figure graphically shows that the major urban areas are mostly located within the western states, depicting the importance of this region in the urban development process.

After Malaya received its independence in 1957, migrations continue to be a factor which shaped the urban growth pattern in Peninsular Malaysia. One characteristic of the rural-urban migration that created an imbalance in the urbanization process was with regard to the movement of rural people to states where the metropolitan areas were located. The trend was noticeable in 1957 when both Kuala Lumpur in Selangor and Georgetown in Penang had the highest percentages of urban population as compared to other major cities (Table 3.3). Generally, this trend in population movement towards more urbanized areas reflected the underlying influence of economic pull and push factors.



Source: Hirschman, Charles. "Recent Urbanization Trends in Peninsular Malaysia." *Demography*. 1976.

Figure 3.3. Distribution of Urban Areas in Malaya, 1957

Table 3.3. Growth of Metropolitan Areas, 1957-1970

Metropolitan areas of 75,000 people or more	Population	
	1957 (in thousands)	1970 (in thousands)
Kuala Lumpur	327	452
Georgetown, Penang	235	269
Ipoh	181	248
Klang	76	114
Total	819	1083

Source: Hirschman, Charles. "Recent Urbanization Trends in Peninsular Malaysia." Demography, November 1976.

From early 1960's, more Malays started to migrate from the rural areas to the urban areas. As shown in Table 3.4, the average annual growth rate of Malays in the urban areas is higher than the other two racial groups. Although other races, mainly Chinese, still constitute the highest percentages of urban population, between 1957 and 1970, the Malays through migrations increased their shares of urban population. Moreover, the movement was facilitated by the vastly improved transportation and communication networks.

There were not many changes in the distribution of cities and towns as Malaysia moved into the 1970's. The metropolitan urban centers continued to grow and be the major concentration of urban growth. Although individual cities grew rapidly, urbanization as a whole was undertaken within the states of Selangor, Penang, Johore and Perak. With

the absence of large and denser patterns of cities in the less developed states of Pahang, Kelantan, and Terengganu, there were widespread imbalances

Table 3.4. Urban Growth Rate by Racial Groups

Year	Percentage of Total Urban Population			Average Annual Growth Rate		
	Malays	Chinese	Indians	Malays	Chinese	Indians
1957	11.2	44.73	30.73	-	-	-
1970	14.3	47.38	34.88	5.3	1.6	3.1

Source: Aziz, Nor Laily. Population Trend - The Implication on Urbanization Process. December 1981.

of economic, social and physical development between the developed states and the other states. The issue of uneven development within states and regions has become one of the major policy concerns related to the national urbanization process.

Regional Development Problems

Serious problems with regard to economic development in Malaysia is related to the inequalities in the development progress that exist between states and regions in the country. There are several ways to analyze regional imbalances.

The first way is to look at regional income disparity among states in the Peninsular Malaysia. Table 3.5 indicates the existence of

regional imbalances in various part of the country. In 1970, Selangor, the most developed state, had the highest per capita Gross Domestic Product. Together with Penang and Perak, these developed states constitute more than three times the Peninsular Malaysia Gross Domestic Product. On the other hand, the poorer states of Kelantan, Terengganu, and Kedah/Perlis received among the lowest per capita GDP and were far below the Peninsular average (about 50 % below the national average). The disparity in terms of per capita GDP is evident within the individual states. Selangor, being a well-developed state, had a GDP per capita almost four times greater than the state of Kelantan. Also shown in Table 3.5 is the population as it relates to shares in GDP. The states which constitute a larger population also received higher shares in GDP. This means that the population growth within the developed states has contributed to an increase in economic development, bringing higher income to these states.

Furthermore, as depicted by Table 3.6, in terms of the economic structure of various states, the wealthy states have made significant achievements in economic growth. It appears that the relatively higher income states such as Selangor and Perak have larger shares of manufacturing(I). The reverse is true where the poorer states are dominated by agriculture-related activities. This economic activity imbalance is also compounded by the fact that it shows a racial overtone. Based on Table 3.6, the dominant Malays in the less developed states were more often engaged in agriculture activities whereas other races, Chinese and Indians, who

Table 3.5. Indicators of Income Per Capita and Population by States, 1970.

State/Region	1970 Per Capita GDP (\$)	Per Capita GDP as a Ratio to Peninsular Malaysia Average (1970)	Percentage Shares of GDP and Population (1970)	
			GDP Share	Population
Kedah/Perlis *	605	0.66	8.1	12.2
Penang	939	1.03	9.1	8.5
Perak	911	1.00	17.1	17.8
Malacca	761	0.83	3.8	4.6
Negeri Sembilan	907	0.99	5.4	5.4
Selangor **	1520	1.67	30.8	18.5
Kelantan	420	0.46	3.6	7.8
Pahang	855	0.94	5.4	5.7
Terengganu	536	0.59	2.7	4.6
Johore	835	0.92	13.3	14.5
Peninsular Malaysia	912	1.00	100.0	100.0

Note: * Kedah and Perlis are two different states but the data are shown as combined.
 ** Data for Selangor includes Federal Territory.

Source: Salih, Kamal. "Decentralization Policy, Growth Pole Approach and Resource Frontier Development" In Growth Pole Strategy and Regional Development Policy. 1978.

Table 3.6. GDP Per Capita, Sectoral Shares of GDP, Racial Composition and Shares of Urban Population (1970)

State/Region	GDP Per Capita (\$)	Sectoral Shares of GDP (%)				Urban Shares of Population (%)	Percentage of Population			
		A	I	S			Malays	Chinese	Indians	Others
Kedah/Perlis	605	58	12	30		13	70.7*	19.3	8.4	1.6
Penang	939	18	22	60		51	79.4**	10.2	2.0	2.4
Perak	911	29	35	36		28	30.7	56.1	11.5	1.7
Malacca	761	31	10	59		25	43.1	42.5	14.2	0.2
N. Sembilan	907	37	25	38		21	51.9	39.6	7.8	0.9
Selangor	1520	14	38	48		45	45.4	38.1	16.1	0.4
Kelantan	420	43	12	45		15	34.6	46.3	18.3	0.8
Pahang	855	42	23	35		19	92.8	5.3	0.8	1.1
Trengganu	536	38	22	40		27	61.2	31.2	7.3	0.3
Johore	835	40	21	39		26	93.9	5.4	0.6	0.1
Peninsular Malaysia	912	29	28	43		29	53.5	39.4	6.7	0.4
							53.5	35.4	10.6	1.0

Note: A - Agriculture, Forestry, and Fishing
I - Mining, Manufacturing, Construction, and Utilities
S - Transport, Commerce, Government, and Other Services
* - Kedah Only
** - Perlis Only

Source: Salih, Kamal. "Decentralization Policy, Growth Pole Approach and Resource Frontier Development." In Growth Pole Strategy and Regional Development, 1978.

historically dominated the urban areas, continue to be engaged in urban types of employment.

According to Table 3.7, the inequalities indicate deep socio-economic problems of unequal development. In terms of per capita value added services, the developed states continue to have much higher levels of services compared to the least developed states. Both Selangor and Penang in 1975 received almost twice as much per capita value added of commerce as that of the Malaysia average and about four to five times as much as the less developed states. Similar disparities were also evident in the case of utilities and transport services. In the provision of educational facilities, the ratio is more evenly distributed but the public health facilities indicate that the less developed states are in a worse situation. There are differences in the quality of services provided to the poorer states. In relation to population served per acute hospital bed and person per doctor, states of Kelantan and Terengganu were above the national average indicating that they were lacking in health services and/or not fully equipped in facilities. Moreover, in terms of the poverty level, Selangor had the lowest incidence of poverty, while the lagging states had the worst situation regarding poverty. In Kelantan, for example, three-fourth of the households were below the poverty level compared to half of Malaysia as a whole. A similar situation also existed in states like Terengganu and Kedah/Perlis. Other states remained close to the average for the whole country.

Another regional imbalance problem is related to inter-regional migration. The overall pattern of inter-state migrations is

Table 3.7. Malaysia: Social Indicators on Standards of Living, 1975

State	Per Capita Value added of selected services sectors (\$)				Persons per doctor	Students per teacher	Persons per acute hospital bed	Rural Population per health center or sub-center	Private Cars per 100 persons	Motor cycles per 100 persons	Percentage of household in poverty *
	U	T	C	O							
Johor	29.8	76.4	129.8	79.7	6,716	30.5	608	19,338	3.2	6.9	45.7
Kedah/Perlis	11.2	41.1	65.0	64.7	9,222	29.6	907	26,085	1.8	6.1	64.5
Kelantan	10.1	44.4	71.5	59.1	11,647	32.0	934	20,045	1.5	3.4	76.1
Malacca	37.1	62.9	221.0	107.4	5,021	29.9	587	20,353	3.9	6.3	44.9
Negeri Sembilan	39.9	92.0	136.9	99.5	4,717	27.2	398	21,581	4.2	7.5	44.8
Pahang	18.2	58.9	104.0	77.8	6,537	29.3	572	13,813	2.5	6.4	43.2
Penang	55.1	123.9	306.5	137.1	3,986	32.0	638	31,170	5.1	10.0	43.7
Perak	43.8	60.5	139.2	81.6	5,944	31.3	648	22,152	3.1	6.8	48.6
Selangor	59.4	187.6	329.2	151.6	2,327	32.4	542	26,195	7.4	8.7	29.2
Terengganu	6.8	36.4	65.2	60.2	10,063	32.1	694	18,724	1.2	3.1	68.9
Malaysia	32.7	89.6	1170.3	101.0	4,344	30.8	627	21,641**	3.8	6.9	49.3**

Note:

U represents utilities

T represents transport

C represents commerce

O represents other services

* 1970 only

** Peninsular Malaysia only

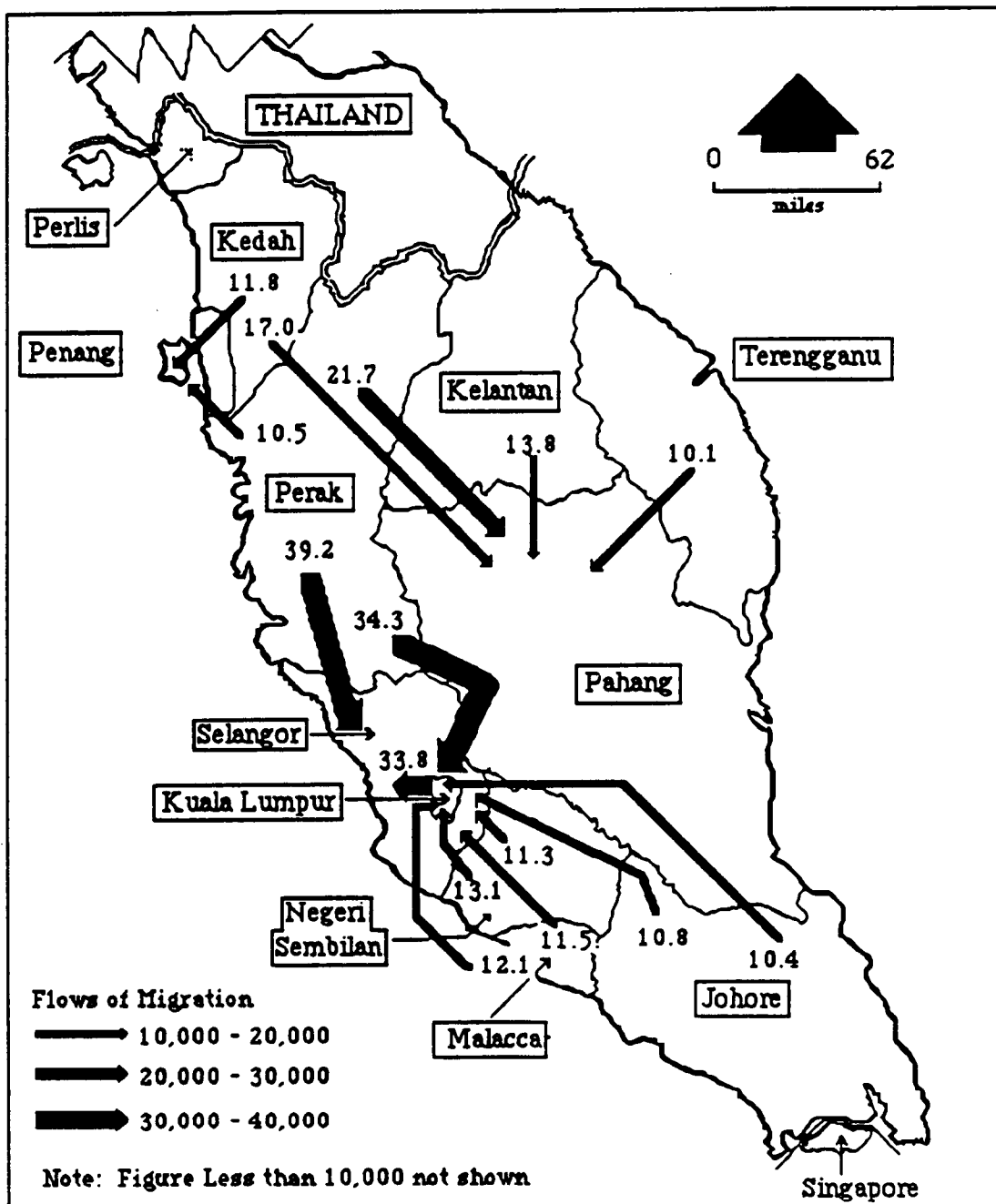
Source: Government of Malaysia. Third Malaysia Plan, (1976-1980). 1976.

symptomatic of the serious regional income disparities. As shown in Figure 3.4, the major migration flow is to Selangor and Federal Territory. Selangor's and Federal Territory's attractions are attributable to the fact that these are the center for industrial development, the federal and administrative capital, and the cultural and educational center. These altogether act as a strong pulling force. The migration to the state of Pahang is partly the result of land development schemes (Federal Land Development Authority) started during the late 1950's. Rapid rural-urban migration had not only imposed problems within the urban areas but had consequently widened the regional imbalances of economic activities in particular areas.

As discussed, the issues of unequal development in Malaysia is related to the historical urban development process. The problems of regional development experienced by this country are not just confined to spatial imbalance but are related to the economic, social, and political processes of a multi-ethnic society. Therefore, it has been the aim of the government to correct imbalance in development through a strong national policy.

New Economic Policy and Regional Development Planning

Since Independence in 1957, Peninsular Malaysia has been faced with the problem of consolidating a nation of great socioeconomic and cultural differences within a multiethnic society. The path of development from 1957 to 1970 was full of challenges when this new nation tried to achieve national integration for its people. Various conflicts emerged



Source: Statistic Department of Malaysia. The General Report of Population Census 1980.

Figure 3.4. Peninsular Malaysia: Net Migration Streams Between States, 1980 (10 Years Preceding the 1980 Census)

during this period which characterized the vulnerability and weaknesses undermining the very foundation of the nation. (Third Malaysia Plan, 1975, p.1) The most significant event growing out of these conflicts was the bloody racial riot of 1969. The riots were caused by dissatisfaction among ethnic groups with the social and economic arrangements at that time. This then is the reason for the creation of the New Economic Policy (NEP).

The New Economic Policy (NEP) was established during the Second Malaysia Plan, 1971-1975 (a five year national development plan) to promote national unity for the Malaysian people. A scenario was envisioned in the nation's economic and social development process where "greater emphasis must be placed on social integration and more equitable distribution of income and opportunities for national unity and progress." (Second Malaysia Plan, 1970, p.1) With the emphasis on correcting the socioeconomic problems of a multiethnic society within the context of a rapidly expanding economy, the NEP incorporated two mutually reinforcing objectives. The first objective was to reduce and eventually eradicate poverty. The second objective was aimed at accelerating the process of restructuring Malaysian society to correct economic imbalances so as to reduce and eventually eliminate the association of race with economic functions. (Second Malaysia Plan, 1970, p. 1) Both of the objectives have stimulated a variety of policies and strategies which are being translated into several developmental programs. With the two objectives, the NEP was designed to act as a catalyst for development efforts by both the public and the private sectors. What is sought under the NEP, therefore, was not only

concern with the improvement in economic welfare but also the visible reflection of the multiracial composition of Malaysian society in its countryside and towns, farms and factories, and shops and offices. (Rahman, 1984, p.323)

Under the poverty eradication objective, the aim was to progressively improve economic condition and quality of life of the poor of all races by directly increasing their access to land, capital, training, and other public facilities which permit the poor to share more equally in the benefits of economic growth. Programs to eradicate poverty include raising the productivity and income of those in low productivity occupations, the expansion of opportunities for intersectoral movements from low productivity to higher productivity activities, and the provision of a wide range of social services designed to raise the living standards of the low income groups. (Second Malaysia Plan, 1970, p.4-5) While seeking to ensure that the poor were taken care of, the NEP was also directed towards giving a fairer distribution of opportunities by widening the range of economic activities for all the Malaysian people. Therefore, through the second objective, the government aimed at providing assistance for all Malaysians to find employment, secure participation, and acquire ownership and control in the various sectors of the economy. (Third Malaysia Plan, 1975, p. 7) Programs and strategies to accomplish this objective included the modernization of rural people, rapid and balanced growth of urban activities, the establishment of new growth centers and the inclusion of more Malays in the commercial and industrial community in all categories

and at all levels of operation. This is to ensure that the Malays and other indigenous people will become full partners in all aspects of economic life of the nation. (Kassim, 1984, p. 51) The New Economic Policy which is to be the basis of subsequent development plans up to 1990 introduced several policies and programs that extend further development efforts towards improving the economic status between races as well as reducing geographical imbalances.

Reducing the socioeconomic differences in terms of geographical areas is one of the main impetus for the adoption of regional development planning under the New Economic Policy. Regional development planning attempts to bring about closer integration of the states in Malaysia. Since the introduction of the New Economic Policy, the Malaysian government has emphasized its commitment to attain the overall goal of reducing regional gaps in incomes and other indices of welfare between the less developed states and the rest of the country. (Second Malaysia Plan, 1970, p.46) In the Third Malaysia Plan (1976-1980), it was stressed that the underlying target of regional development was to have an equitable balance among regions and states in Peninsular Malaysia by a more equitable distribution of not only income but also facilities for health, education, infrastructure, recreation, housing, and most important, opportunities for social and economic development of the people in accordance with the New Economic Policy objectives. (Third Malaysia Plan, 1975, p. 199) This view of regional development strategy can further be translated in terms of the operational goals as:

1. reducing excessive rural-urban migration especially migration from the depressed areas to already congested areas, particularly of the Klang Valley region.
2. reviving and strengthening agricultural and industrial development in lagging regions.
3. redirecting new development and growth to less developed regions of the country.
4. urbanizing and industrializing rural and agricultural areas.
5. resettling and rehabilitating selected frontier regions. (Adlen and Awang, 1985, p.500).

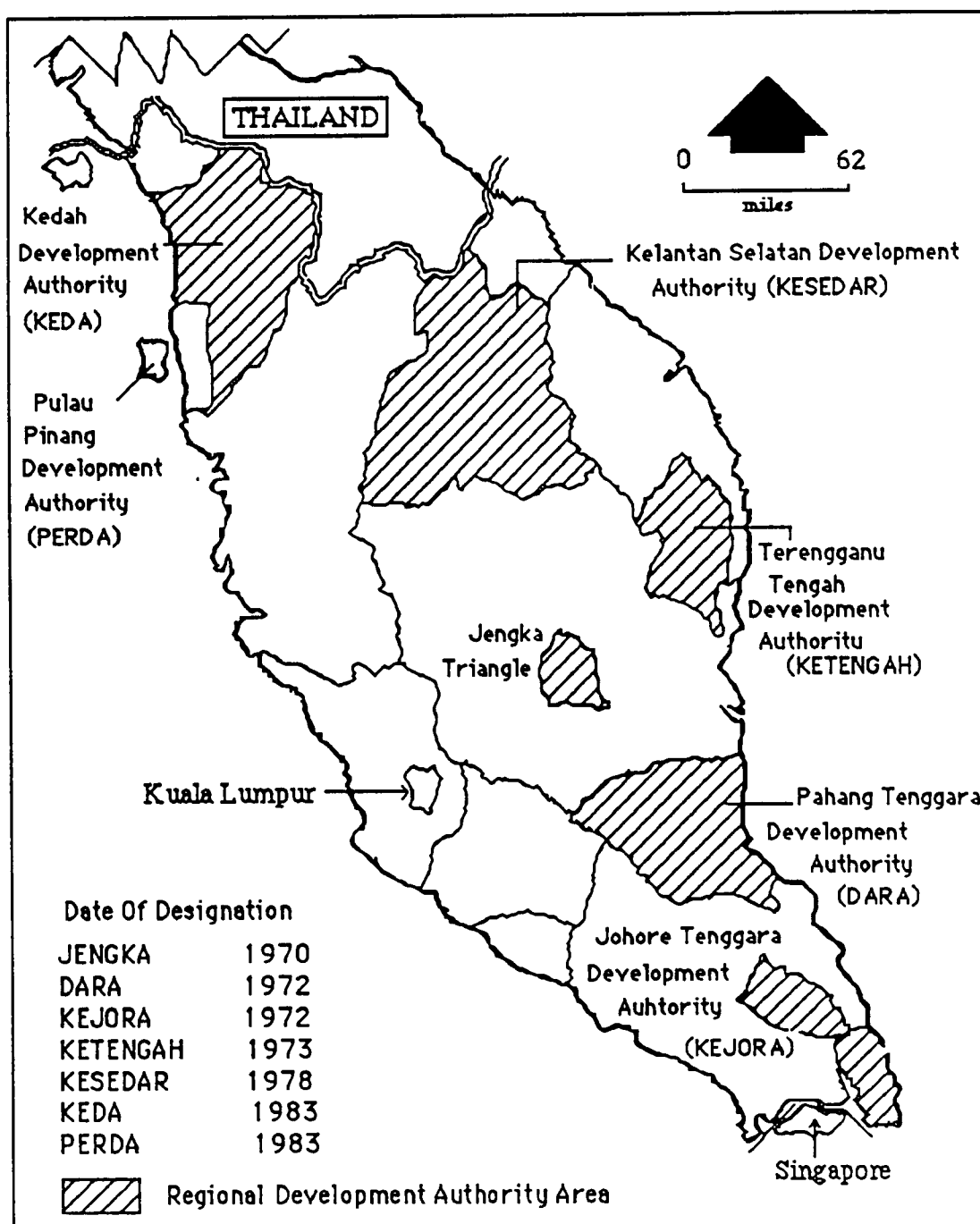
These prescribed regional development planning goals are centered around decentralizing economic growth to the less developed region while at the same time controlling existing urban growth. Thus, the development task undertaken by regional planning basically consists of two types, (1). for the developed region and metropolitan areas such as Klang Valley regional plan; and (2). for underdeveloped or frontier region such as Pahang Tenggara and Jengka Triangle.

A number of strategies have been adopted to achieve the regional development goals. Although all the strategies discussed here are not directly related to the establishment of a new town policy, the structural framework of these strategies does include the new town approach as one of the alternatives in decentralizing urban development.

The first strategy is concerned with resource and new land development. Among the four strategies, this is the most important because

it is the means by which the government seeks to direct the location of future growth in agriculture, manufacturing, and services toward the lagging regions. This will encourage the mobility of large numbers of people to the new land development areas as well as alleviate the problems of rural-urban drift when the development of resources and the opening up new land provide more employment opportunities in agriculture, and manufacturing sectors. Resettlement and new land development programs have been implemented throughout the country. The main target area for this program is concentrated in the land rich states of Pahang, Johore, and Terengganu and in the poorer states where there is availability of suitable agriculture land such as in Kedah, Perlis, and Kelantan. To undertake the development programs, several Regional Development Authorities were established by the government. The area for Regional Development Authorities (RDA) is graphically shown in Figure 3.5. Beside promoting, stimulating, and facilitating the economic development of the development areas, the authority is also responsible for setting up new towns in order to promote urbanization, industries, and provide services to the rural people.

The second strategy is related to "in-situ" rural development strategy. The term "in-situ" refers to the development effort aimed at improving the productive base, employment, and income levels in existing villages and agriculture areas particularly within the less developed states of Kelantan, Kedah, Perlis, and Terengganu. (Kassim, 1983, p.80) The present "in-situ" program involves defined areas, planned integrated activities, and special implementing and coordinating organizations. The



Source: Alden, J.D., and Awang A.H., "Regional Development Planning in Malaysia." Regional Studies, 1985.

Figure 3.5, Regional Development Authority and Its Designated Date

project involves activities such as the extension of drainage and irrigation facilities, replanting of old rubber and coconut small holdings, and the provision of credit, marketing, and fertilizer subsidies. Through project oriented program organized by Federal and State agencies, the "in-situ" development strategy will help modernize and increase the production of agriculture sectors and thus elevate both the level of income and the standards of living of rural farmers. (Mat, 1983, p.125)

Industrial dispersal is the third strategy adopted to achieve the goals of regional development planning. The emphasis on this strategy is motivated by several factors which include (1). the importance of industry in promoting regional development; (2). the relative mobility of industrial development in terms of location; and (3). the government's objective of encouraging the Malays to become employed in industrial manufacturing. (Adlen and Awang, 1985, p.505) Provision of locational incentives, free trade zones, investment allowances, range tax holidays, improvement of infrastructural facilities, and establishment of industrial estates has been geared to encourage industries. Emphasis will be given towards creation of employment, development of light and heavy industries, and participation of Bumiputeras (the term Bumiputera refers to "sons of the soil", the Malays and other indigenous people) in the manufacturing sector of the economy. The industrial dispersal strategy is a plan for the land development areas as well as the resource abundant areas of Kedah, Kelantan, Pahang, Terengganu, Johore, and Perlis. Attention is also being given to distribute industries to new and small towns.

Finally, the last strategy is rural urbanization and the creation of new growth centers. These two aspects of urban development are important because urbanization has been recognized to be one of the key elements in achieving the objective of poverty eradication and the restructuring of society as well as redressing imbalances among regions and between urban and rural areas. The urban development and growth center strategy are viewed as a means of promoting an integrated economy through reduction of inter-regional disparities. Moreover, urbanization is thought to contribute more effectively and have greater effect in terms of the overall development process. This is the reason why urban development has become the central focus when the regional development strategy was adopted during the Second Malaysia Plan. Deliberate urban development policies have been formulated following these premises:

1. The spreading of urban development rather than perpetuating polarization in a particular region. The development of urban centers in the less developed regions help stimulate growth and achieve the balanced distribution of economic activities throughout the country.
2. The integration of the development of new growth centers within the hinterland areas with the attempt to bring greater urbanization and industrialization to the rural areas.
3. The strengthening of linkages between various cities and towns through the development of a denser system of urban centers with

the emphasis ensuring the spread of urban employment opportunities and services to a wider range of people.

4. The development of urban centers for the creation of agglomeration economies through location and growth of mutually supporting industries and services establishment. (Maarof, 1981, p.20)

To accommodate the above policy, a three tier system of urban hierarchy was formed to establish a rationalized system of growth centers. The structure of the system was envisaged as follows:

- (1). At the top level of urban development are the major growth centers in the Klang Valley, Ipoh, Penang, and Johore Bahru.
- (2). At the middle level are the development of intermediate cities such as Kuantan, Muar, Kota Bharu, and Alor Star.
- (3). At the lower level are the network of new townships in both rural and urban conurbations, for example the new town within the Pahang Tenggara.(Paul, 1983, p.62).

Although the spread of urban development is first targeted for the intermediate size cities, this strategy also incorporates the development of new towns.

New town development efforts are a part of the urban development program to bring about modernization, provide higher quality

of life, and better accessibility to public amenities and urban type of activities for the rural people while at the same time fostering development to the isolated and underdeveloped regions. The new town policy in Malaysia relies heavily upon the objectives of the New Economic Policy as well as the goals of the regional development planning. Thus, the policy of building new towns is intended to:

1. Contribute to the restructuring of society through increased urbanization of Bumiputeras and the greater involvement by this group to participate in industrial and commercial activities so that it reflects the ownerships of Bumiputeras in the urban shares of the economy.
2. Induce the concentration of population which would otherwise be dispersed in traditional rural development.
3. Reduce the rapid rural to urban migration.
4. Provide easy access to urban services, facilities and market outlets for the rural population as well as foster industrial development.
5. Create a pool of labor and consumers sufficient to attract commercial and industrial activities.
6. Provide housing and urban services and also to help nurture the development of Bumiputeras' entrepreneurship within the urban areas.

7. Control the problems of existing cities and urban poverty.

New town planning today exists as a result of various socioeconomic and sociopolitical problems which differ somewhat from the situation when the first new town was built in Malaysia. The new town development policy relates to the New Economic Policy in several distinct ways. One of the tasks of a new town is to balance the Malay population in existing metropolitan areas. In Kuala Lumpur, the aim is to settle the urban poor, especially the Malays, within the planned town in order to balance the new housing projects for the Chinese and other races surrounding the city. New towns are also built to distribute the urban population scattered around a particular city. The role of such new towns is to disperse industrial activities and to cope with the population pressures and socioeconomic problems of metropolitan areas. Aligned with the NEP objectives, the new towns are planned to create a balanced community among ethnic groups so as to integrate the Malaysian people in an improved socioeconomic environment by assisting them with a wider range of economic opportunities. The new towns have also been viewed as a tool to assist development of the frontier region and as a means of providing the rural population with the advantage of urban services and off-farm employment. In other words, the building of new towns in rural areas is another way to urbanize the Malays and increase the number of urban centers so that the location of cities reflects evenly the spatial distribution of urban functions. Through this type of new town, it is hoped they will reduce the migration of

rural people to large urban centers when the new towns are provided with diversified social and economic activities.

The planning of new towns is not only an attempt to balance urban population and to urbanize the Malay population, but also to increase the Malays' shares in the secondary and tertiary activities in such a way that occupational types are not identified with any particular ethnic groups or geographical locations. The development of new towns within this context is intended to create opportunities for the Bumiputeras to participate in urban related activities. By development of several new towns, it is thought it will contribute to an increase in Bumiputeras' income as well as restructuring the sectoral and employment patterns so that they reflect the racial composition of the country.

New Towns Development Movement

The rapid urbanization during the last fifty years in Kuala Lumpur has been so remarkable that it has almost become the primary city in Malaysia. Even though the dominance of Kuala Lumpur is not as marked as the dominance of other primary cities in the Southeast Asia such as Bangkok in Thailand or Manila in the Philippines, over the years the city has experienced accelerated growth which resulted from rapid expansion of social and economic activities. The growth of Kuala Lumpur is the consequence of intense rural-urban migration which began after the end of the Second World War. Due to the insecurity of the countryside, large numbers of people migrated to Kuala Lumpur. Even before the war the city

had faced a serious shortage of housing and when the war came it brought further problems in the provision of housing. Like many other growing cities in the developing countries, the consequences of inadequate housing supply forced city migrants to settle in squatter settlements and slums in the city. The squatter community in Kuala Lumpur had risen from one-sixth of the city's population before the war to more than a quarter of its population in the early 1950's. (Lee, 1987, p.154) Urban congestion together with its related problems became a major concern by the city government officials. The urgent need to overcome these population pressures in Kuala Lumpur induced the first effort to find an alternative to control urban growth. This effort lead towards the building of new towns.

Planning for the first new town at Petaling Jaya, six miles from the central city of Kuala Lumpur was an attempt to remedy the overcrowding of the city and to provide housing to the squatter and slum dwellers residing around the urban area. Petaling Jaya was built right after the war and was influenced by the British New Town Act of 1946. The new town of Petaling Jaya was planned based on principles similar to those of British new towns by combining location of work, residence, and recreation in a healthy living environment. Petaling Jaya was constructed by a development corporation, Selangor State Development Corporation, a quasi governmental agency. It did not take long for this new town to grow and become the fifth largest city in the nation. A good road system with locational advantages along the Federal Highway, connecting Kuala Lumpur and Port Klang encouraged industries to locate in this town. The proximity

of this new town to a major urban center made it an ideal suburban town for a large number of middle class people. This created demands for better housing and other amenity services. Just between 1953 and 1955, the developed area of Petaling Jaya increased from 205 acres to 1,611 acres. (Lee, 1987, p.156) Since then the town has not stop growing. After forty years of development, Petaling Jaya now has 218,300 people and experiences among the highest average annual growth rates in the country.

The new town movements, which generally began in the 1970's, is said to be influenced by the establishment of the New Economic Policy. New towns not only had been concentrated in urban areas but had begun to be located in other parts of Malaysia, particularly in the areas designated by the Regional Development Authority. Since the adoption of the regional development strategies, new towns were extensively being constructed. There were a variety of purposes for the establishment of the new town policy in Malaysia. Although, the earlier purpose was to control urban congestion and its concomitant problems, the purpose now was extended to include the whole gamut of development. The purpose for new towns in Malaysia can be categorized as follows:

1. to relieve the congestion of large urban centers as well as directing future growth of metropolitan areas;
2. to be a part of national urbanization and development policy;
3. to decentralize and redistribute human activity as well as promote further development to less developed regions in Malaysia;

4. to cope with the overburden of population growth in particular urban areas due to the consequences of rapid migration;
5. to develop frontier regions and to provide economic opportunities to specific sections of the population; and
6. to establish a series of growth centers and new townships within the context of the regional development plan.

The planning and development of new towns in Malaysia was always the responsibility of government or a quasi governmental agency. Many of the new towns in the Klang Valley, namely Petaling Jaya, Shah Alam, and Bangi were developed by the state government through the State Development Corporation. Other government agencies who were also responsible for new towns development include the Kuala Lumpur City Hall and the Urban Development Authority. New towns located in the frontier regions were mainly developed by the Regional Development Authority formed by each states under the Ministry of Land and Regional Development such as DARA in Pahang, KETENGAH in Trengganu, and KEJORA in Johore.

Conclusion

The existing distribution of urban areas in Malaysia is the consequence of a spatially uneven urbanization pattern resulting from Colonial influences. For almost two decades the emphasis on changing the urbanization pattern has been one of the elements in accomplishing the objectives of the New Economic Policy. Various strategies and programs

have been implemented during the NEP period. The new town approach has become one of the component of the urbanization strategy. As discussed earlier, the construction of new towns to implement the national development policy shows the importance of this development approach in stabilizing backward regions, slowing down the impoverishment of the population, restructuring society, and redistributing population and economic activities. Because of the new towns' role in the Malaysian urban development process, it is important to look at the progress of some of the new towns within the last 20 years of active implementation of the New Economic Policy.

CHAPTER IV

THE PLANNING OF NEW TOWNS

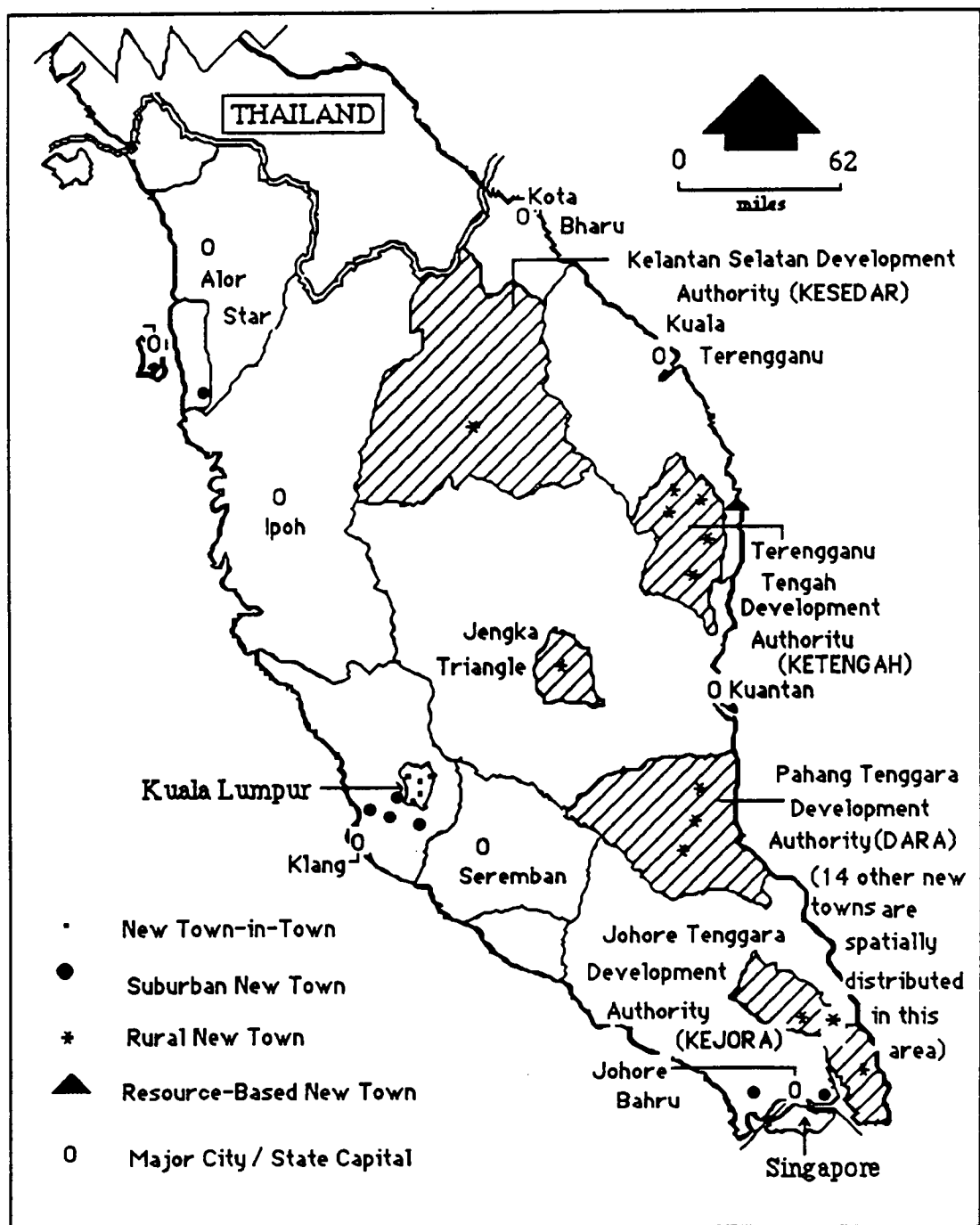
New towns have been constructed in Malaysia at a rapid pace within the last two decades. This indicates the importance of new towns in the practice of urban planning in Malaysia. This chapter consists of a discussion of different types of new towns, specifically focusing on the planning principles, locational characteristics, and functional purposes which are essential to understanding new town development.

Location and Distribution of New Towns

New towns in Malaysia can be classified into four types. The difference between one type of new town and another is mainly due to location and economic functions. Based on these differences, the four classifications of new towns are:

- (1). Suburban new town or urban fringe new town;
- (2). Rural new town or frontier new town;
- (3). New town-in-town; and
- (4). Resource-based new town

The location of major new towns and their appropriate classifications are shown in Figure 4.1. The figure graphically identifies where the new towns are located. At the present time, there are 50 new towns under



Source: Lee Boon Thong. "New Towns in Malaysia: Development and Planning Policies." In New Towns in East and Southeast Asia. 1987.

Figure 4.1. Location of Major New Towns in Peninsular Malaysia

construction. Only forty new towns are shown. These new towns have actually been implemented with varying degrees of completion.

The difficulty of gathering data from each type of new town limits the scope of the investigation. The focus will be on two major categories of new town -- the suburban new town and the rural new town. Data for these two types are more available than for the other two types of new towns. In addition, these two categories are the types of new town presently the most being developed. However, it is also important to review all four categories of new towns because they provide a broader perspective on how Malaysia applies the new town idea within its national development process.

Suburban New Town

The suburban new town was the first category of new towns to be implemented in Malaysia. In fact, the first new town at Petaling Jaya was developed as a suburban new town. The term "suburban" in this context refers to the fringes of metropolitan areas. In Malaysia, there are four cities large enough to be considered as metropolises -- Kuala Lumpur, Georgetown-Butterworth conurbation in Penang, Johore Bharu, and Ipoh. The suburban new town is typical of the new town concept. The idea of the modern new town was originally conceived to remedy the overcrowding and unhealthy urban environment in large cities. Malaysian cities have also faced various social and physical effects of congestion, overcrowding, inadequate housing, and inadequate infrastructure. Therefore, the need for a new town was felt.

Although the area where the first new town was developed is in the Klang Valley around Kuala Lumpur, elsewhere in the country many new towns have also been built, particularly around Penang and Johore Bharu. A list of suburban new towns includes Petaling Jaya, Bangi, Shah Alam, and Subang Jaya near Kuala Lumpur; Bayan Baru and Bayan Lepas in Penang; and Pasir Gudang and Senai in Johore Bharu. These new towns are located somewhere between 6 to 30 miles of their respective metropolitan areas. The location and distribution of these new towns are displayed in Figure 4.1.

Developing a complete new town is less costly compared to the continuous upgrading of an existing urban areas. The new town is an alternative to solving many urban problems. In the case of Malaysia, building new towns surrounding the metropolises released the pressure of urban expansion. The real contribution is in providing a variety of services and a sound living environment that cannot be provided efficiently in an existing urban area. The suburban new town is a way of controlling the growth pattern of urban areas. Suburban new towns are developed to accomodate various socioeconomic and ethnic groups in a well balanced community. (Mohamad, 1983, p. 347)

The suburban new towns in Malaysia were developed as self-sufficient and self-contained towns with ample opportunities and complete urban facilities. A distinct characteristic of the new town was the functional purpose within its designated area. Each of the new towns had specific functions based on where it was located and what constituted the surrounding environment. For example, Shah Alam, a new town located

between Port Klang and Kuala Lumpur, captured the central position for industrialization as well as be the symbol for the state of Selangor. As a state capital, the town had been planned to fit the purposes of a state capital city with many state government offices, shopping centers, public amenities and facilities. Unlike Shah Alam, the new town of Bangi was located to the south of Kuala Lumpur. With the existence of the National University and the Agriculture University in its immediate vicinity, Bangi has become more or less a university town which also serve as an administrative centers and a light industrial center. Due to Subang Jaya's proximity to Petaling Jaya, this new town has the characteristics of a satellite town. A satellite town was defined as a new large scale urban settlement built within commuting distance of a metropolitan area which provides for urban population growth.(Golany, 1976, p.49) Subang Jaya is primarily a bedroom community with extensive residential areas, but with such limited types of land use it is economically dependence on the Petaling Jaya/Sungai Way. Table 4.1 lists some of the suburban new towns with their main functions and locational orientations. Generally, the location of the suburban new town is determined by several factors, including accessibility to existing roads and other means of transportation, availability of resources, and an agglomeration of economic activities surrounding their respective regions.

Rural New Town

The second category of new town is virtually the most significant of the urbanization strategy. The construction of a rural new

Table 4.1. Samples of Suburban New Town's Location and Functional Purpose

Town	Date Estab- lished	Distance From Metro- polise	Functional Purpose	Location	Planned Population
Petaling Jaya	1947	6	Heavy and light industrial center with district administrative function and concentrated commercialization.	Located west of Kuala Lumpur on Klang-Federal Territory Highway.	280,000
Shah Alam	1964	17	State Administrative, industry and commerce.	To the west of Kuala Lumpur along Klang-Federal Territory Highway close to Port Klang.	200,000
Bangi	1974	20	District Administrative, light industry, office/technical administrative training center.	Proximity to Kuala Lumpur-Seremban highway and immediate vicinity to two universities.	100,000
Subang Jaya	1972	10	Bedroom community, light commercial	Adjacent to Petaling Jaya, west of Kuala Lumpur.	50,000
Bayan Lepas	Early 70's	25	Manufacturing industry, tourism, and regional service center.	South of Georgetown and close to several training institutes and Science University.	150,000
Bagan Serai	Early 70's	20	District center, manufacturing industry, regional service center	South of Butterworth and close to Mak Mandin industrial area.	120,000

Source: Selangor State Government. Bangi Draft Structure Plan, 1986-2005. 1987.

Malaysian Institute of Planners. Forum on Kuala Lumpur Master Plan, 1974.

town or frontier new town in Regional Development Authority (RDA) areas is a means of providing economic opportunities to a specific section of the populace, normally the rural population who actively engages in agriculture related activities. The urbanization strategy employed here is basically an attempt to concentrate all hinterland populations into centralized new towns, where all urban amenities and facilities are provided. (Rahman, 1983, p. 326)

New towns situated in the frontier areas are categorized as agropolitan centers. Development of such a new town is based upon natural resources, mainly agriculture and forestry with a provision for industrial activities, especially processing industries. Besides improving the economy of lagging territories, rural new towns were planned and constructed to modernize the rural population by providing an attractive urban environment within the agricultural, manufacturing, commercial, and administrative sectors. As mentioned in the previous chapter, the bulk of the country's population is still living in rural areas (about 71 percent of the total population in 1970 were sparsely distributed in rural areas), most of which are Malays. The development of rural new towns represents the vanguard of providing an increased quality of urban life for rural people.

There are two categories of new towns currently under development in the regional development areas. New towns which have been developed in DARA (Pahang Tenggara Development Authority), KEJORA (Johore Tenggara Development Authority), KETENGAH (Terengganu Tengah Development Authority), and Jengka Triangle consist of totally new centers

and townships. However, other regional development areas such as KESEDAR (Kelantan Selatan Development Authority) developed its new town based on expanding an existing town. Under the latter concept, efforts are geared towards developing and upgrading the existing town and potential rural centers for a new planned community, so that better and more modern facilities are provided. With respect to the former development, new towns and new settlements are constructed within the Regional Development Authority areas on undeveloped land. Examples of rural new towns include Bandar Pusat, Bandar Muadzam Shah, Bandar Penawar, Bandar Tenggara, Ketengah Jaya, etc. Locations of the major new towns are shown in Figure 4.1. The distribution of the new towns shown is based on the premise of locating service centers to supplement the land development schemes.

In order for the residents to adjust to living in new towns, attention is given to the cultural and social living arrangements of the residents, who normally come from other states. It is thought that because the new town's residents would experience rather sudden changes if they were living in a town which was too urbanized, all the rural new towns retain characteristics of a rural environment. Among the characteristics are larger lot sizes for household vegetables and poultry farming, traditional types of housing which are built on stilts, and a clustering of houses surrounding an open courtyard for greater social interaction. Moreover, with a provision for industrial development in the new town, industries can provide an alternative for off-farm employment. The construction of the rural new town is a direct approach to channel migration away from the

large urban centers. The building of these new towns is intended to cater to migration not only from within the Regional Development state but also from intrastate migrations.

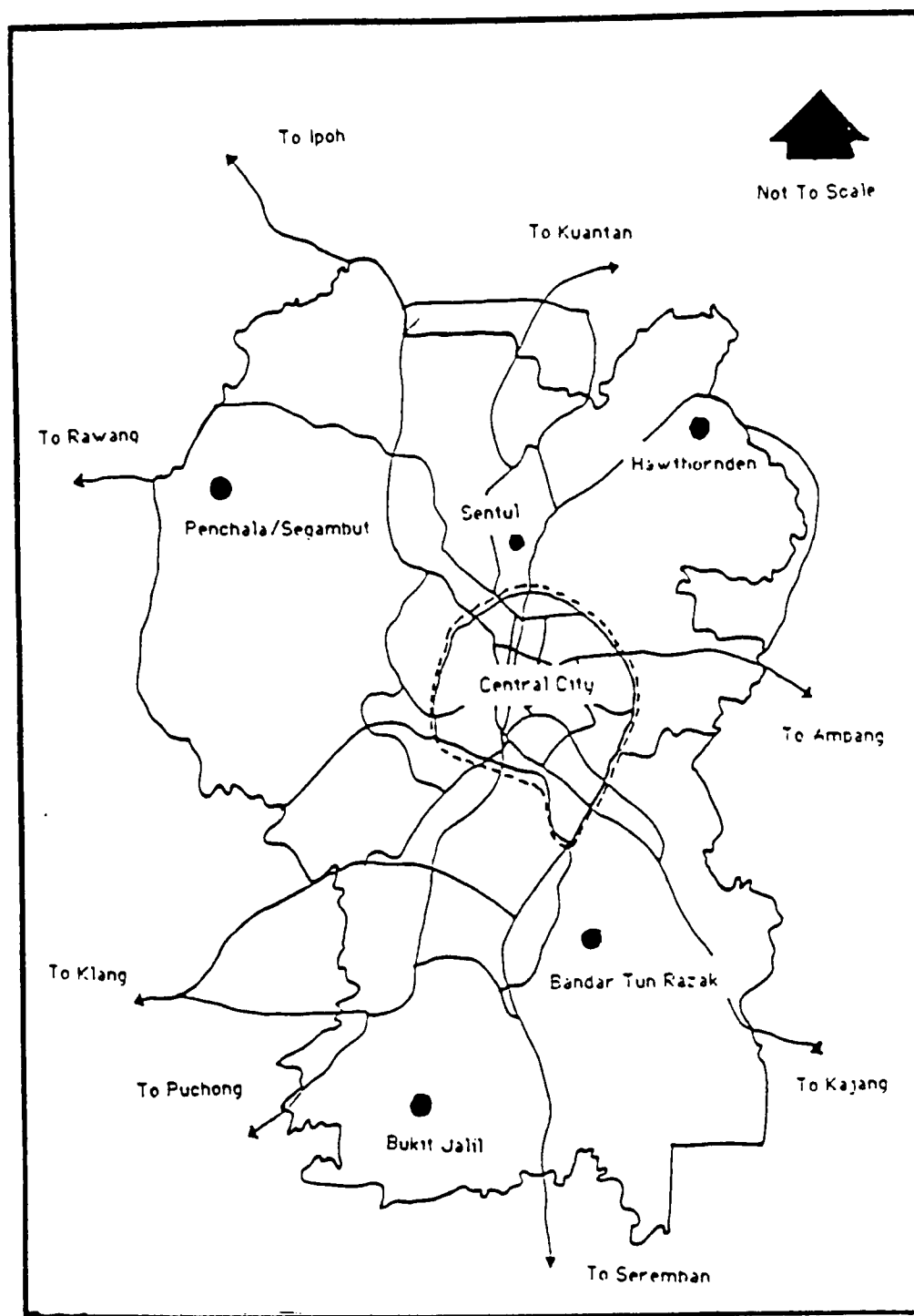
New Town-in-town

The next category, the new town-in-town is the application of some new town principles within large cities. (Golany, 1976, p.5) The motive for constructing a new town-in-town is to satisfy the needs for a solution to the problems of cities, such as inadequate housing, squatters, and slums. Harvey Perloff, who conceived the idea of the new town-in-town as an alternative to urban renewal, believes that this kind of urban development "can greatly help in transforming the physical environment of the city in keeping with social objectives and human resources needs. It cannot solve all the human problems of the city, nor even all the physical problems (but) it can provide a valuable lever for both." (Perloff, 1966, p.155) The purpose of building a new town-in-town is to revitalize physically and socially the existing urban center, stabilize surrounding neighborhoods, and provide a full range of housing, urban services, social and cultural amenities, and educational facilities within easy access of center city residents. (Golany, 1976 p. 51)

In Malaysia, the development of new towns-in-town is relatively recent. The five new towns-in-town are Hawthornden, Bukit Jalil, Bandar Tun Razak, Penchala/Segambut, and Sentul. All are constructed within the city of Kuala Lumpur, between four to six miles from the central

city. Generally, the new town-in-town is constructed in an existing settlement or population concentration areas where there are squatter settlements, such as in Bandar Tun Razak, Sentul and Bukit Jalil; within a housing development project which had not yet fully developed, such as Hawthornden; and in the traditional village settlements of Penchala/Segambut. (Mohamad, 1983, p.346) The purpose of building this type of new town was to provide complete urban facilities and other public amenities for the less fortunate urban dweller. In addition to solving the inadequate housing and squatter problems, the new town-in-town has a role in promoting employment opportunities when new light industries or commercial developments are supposed to provide jobs to the local people in the town. However, most new towns are intended to provide the mechanism for guiding and controlling the distribution of population and employment, and hence the distribution, mixing, and segregation of various land uses. (Kuala Lumpur City Hall, 1982, p.197) It is also the purpose of the new town to facilitate the balancing of growth and development within the city.

Figure 4.2 shows the location of five new towns-in-town in Kuala Lumpur. They are dispersed throughout the city following major transportation nodes with each linking the town to the central city. The new towns are located to accommodate future development growth to the northeast, southwest, southeast, north, and west part of the Federal Territory. This pattern closely follows Kuala Lumpur's Master Plan which emphasizes balanced development of Kuala Lumpur through moderate



Source: Kuala Lumpur City Hall. Kuala Lumpur Draft Structure Plan.

Figure 4.2. Location of New Towns-in-Town in Federal Territory.

development of the city and a much faster development of the outlying areas. (Kuala Lumpur City Hall, 1982, p.32)

The five new towns-in-town built surrounding the existing city are mostly large scale housing development projects. The purpose was to revitalize certain areas of the city where squatters and inadequate infrastructures existed. In the new towns-in-town of Bandar Tun Razak and Sentul, many low cost housing has been built to accomodate these needs. The emphasis on one housing type creates an imbalance in terms of land uses. There is less variety of housing types and certainly there is less integration of community groups. Based on some field experience in Bandar Tun Razak, the demographic composition is not racially balanced. The Malays are the majority of the population of the new town. Even though it is the intention to settle the Malays in the planned new town so that the new town projects will counterbalance the housing projects for the Chinese and Indians. the concept of social balance related to demographic balance has not really happened in the planned new towns-in-town of Kuala Lumpur.

The new towns-in-town are not fully self-contained towns. For the most part, they are bedroom communities. However, in the planning of the new town, there was a provision for industrial manufacturing and commercial establishments to support the economic base of the town. There was also the ability to attract local residents to use the urban facilities and to reduce the cost of commuting and traffic congestion if they were employed or engaged in local activities.

The new towns-in-town mentioned in this chapter are at various stages of implementation. Some of the new towns such as Bandar Tun Razak are growing steadily. It is difficult to obtain data for new towns-in-town; therefore, for the purpose of the study, this type of new town was not included in the evaluation.

Resource-Based New Town

The last type of new town is exemplified by a recent resource based new town specifically related to petroleum resources. This category of new town has been developed as a result of the petroleum based industries started since 1978. (Lee, 1987, p.153) The new town is constructed to house industrial workers who came to the area following the discovery and exploration of oil and gas. The only example is Kerteh new town in Terengganu. (Figure 4.1) Since the only resource based new town existing under this category is Kerteh, the author will not go into detail about it. Due to the very recent establishment of Kerteh in 1984, there was not enough data to investigate this town. It is however, worth mentioning because of its difference from other new towns and its specialized functional purposes.

The resource-based new town (Kerteh) is being built in a rural area and is similar to other rural new towns. The location is near to existing towns of Kerteh Old Town and Kemasik. It is planned and designed to serve the local people who are engaged in petroleum industrial related activities. The town is also being provided with urban services to accommodate the needs of the town's population. Kerteh new town is being developed by

Terengganu State Development Corporation with the cooperation of Petronas and ESSO, both of which are oil companies responsible for the extraction of oil and gas in the Terengganu shoreline. Kerteh's physical characteristics are similar to other new towns. However, the demographics characteristic are different because Kerteh will also accommodate foreign residents who work for the oil companies. As a result several additional social amenities are provided, such as an international school, golf courses, and a yacht club, which may not benefit local residents, but will be provided for this limited group of people. (Mohamad, 1983, p.348-349)

The dependence on oil and gas as the basis for industrial development in this new town does not ensure its viability because the price of oil depends on the world's economy; the price of oil thus influences the progress of the town. Furthermore, according to a report done in 1986 regarding the impact of the petroleum industry in Kerteh, the development progress of the town has been very slow. Its land has been largely unoccupied since its initiation three years ago. (Voon and Khoo, 1986, p.57) Many of the residents are employees of the oil companies. Local people who work for the oil companies did not move to the new town because it was too costly. The nearness of Kerteh to existing towns make it less desirable for some people to move. It is too soon to judge the success of Kerteh. For the time being, however, Kerteh has been very slow in attracting various groups of people, and this slowness could impede future growth.

New Towns Structural Development

Two components of new town structures are discussed in this chapter. These two components, the size of the new town and the land uses, influence the spatial distribution of new towns throughout the country.

There are two factors which influence the size of new towns. The hierarchy and the location of the new towns are those two. (Mohamad, 1983, p. 349) From a hierarchical perspective, there are two groups of new towns-- the hierarchical new town and the non-hierarchical new town. (Mohamad, 1983, p.349) The hierarchical new town is broken into two subcomponents; that is, new town-in-town and rural new town. Table 4.2 displays the division of the new town hierarchy. The planned population for each of the hierarchical new towns determines the size of the new town. For the new towns-in-town constructed within the city of Kuala Lumpur, the master plan for the city called for several hierarchy of new town structures. The city center (rank 1) continues to be the central focus of development, where a definite concentration of physical and economic activities are intended to provide for specialized metropolitan services, national and international commercial and business activities, central government activities, and other related government functions. Decentralization of growth brought the dispersal of new towns into major subcenters (rank 2) and intermediate subcenters (rank 3). The major subcenters are Hawthornden, Bukit Jalil, and Penchala/Segambut, which are one step higher in rank than intermediate subcenters and also have a larger population size. On the other hand, Sentul and Bandar Tun Razak are

Table 4.2. Hierarchy of New Town Development

New Town Category	Planned Population
New Town-in-town	
Major Subcenter	
Hawthornden	120,000
Bukit Jalil	120,000
Penchala/Segambut	120,000
Intermediate Subcenter	
Sentul	100,000
Bandar Tun Razak	100,000
Rural New Town	
Pahang Tenggara	
Regional Center- Bandar Muadzam Shah	70,000
District Center- Bandar Cini	30,000 - 50,000
Service and Supply Center (3 new towns)	20,000 - 30,000
Processing and Basic Service Center (9 new towns)	10,000 - 20,000
Resource Base Center (3 new towns)	5,000 - 10,000
Terengganu Tengah	
Ketengah Jaya	20,000 - 25,000
Ceneh Baharu	10,000 - 15,000
Al-Muktafi Billah Shah	"
Bukit Besi	Less than 10,000
Seri Bandi	"
Cherul	"

Source: Kuala Lumpur Draft Structure Plan. 1982.

Information Malaysia Yearbook. 1988

Taylor John L. and William David G. "Towns for Plantation Agriculture: Pahang Tenggara, Malaysia" in Urban Planning Practice in Developing Countries 1982.

planned to have a smaller population size. The spatial distribution of rank 2 and rank 3 new towns (Figure 4.2) is emphasized by ribbon developments along major arteries leading into the city. (Kuala Lumpur City Hall, 1982, p.29) The location of the first three higher ranking new towns are on the edge of the city limit, because according to the Master Plan, this is the way to promote balanced growth of Federal Territory. It also distributes the city's population to an area with the highest potential for growth. The size comparison between rank 2 and rank 3 new towns is not really significant, but in terms of the ratio of intended population for the Federal Territory, rank 2 new towns will have 16.5 per cent of the Federal Territory's population by the year 2000, while rank 3 new towns 10.0 per cent of the whole city's population. (Kuala Lumpur City Hall, 1982, p. 37).

In regional development areas, especially Pahang Tenggara (DARA) and Terengganu Tengah (KETENGAH), all the new towns were planned to have a different hierarchy. As shown in Table 4.2, in Pahang Tenggara, there are five levels of new towns. The first rank new town is a regional center, Bandar Muadzam Shah, which is planned to accommodate 70,000 people. The second rank new town, the district center, is planned to have a population between 30,000 and 50,000 people. Third is the service and supply center with 20,000 to 30,000 people. Fourth is the processing and basic service center of 10,000 to 20,000 people. Finally, the resource-based settlement with less than 10,000 people.

The size of a particular new town plays a major role in determining the type of economic activities and the level of social services

that can be economically provided. Therefore, the larger the intended population size, the greater variety of services that will be built in the new towns. Table 4.3 illustrates the facilities provided for some of the new towns in Pahang Tenggara.

Table 4.3. Facilities Provided for Some of the New Towns in Pahang Tenggara.

Hierarchy/New Town	Kind of Facilities Provided
Rank 1 Bandar Muadzam Shah	3 elementary schools, 2 secondary schools, village health clinic, hospital, police post, police headquarters, postal agency, postal office, fire station, public library, mosque, public hall.
Rank 3 Perwira Jaya	2 elementary schools, secondary school, small police headquarters, community health clinic, village health clinic, postal agency, postal office, mosque, public hall.
Rank 5 Bukit Ibam	Elementary school, small hospital, small police station, postal agency, public hall.

Source: Mohamad, Sulong. Perancangan Bandar Baru, DEB, dan Pembangunan Negara (New Towns Planning, New Economic Policy, and National Development). October 24-25, 1983.

In Terengganu Tengah (KETENGAH), the size of the new towns is smaller than the new towns of Pahang Tenggara. Only three hierarchies exist for new towns in this area. The new town of Ketengah Jaya is planned

to have 20,000 to 25,000 people; two new towns -- Cheneh Baharu and Al Muktafi Billah-Shah with 10,000 to 15,000 people; and three new towns with less than 10,000 people.

The size of new towns in rural development areas has policy implications on the urbanization strategy being employed. In each regional development area, the different sizes of new towns increase the number of towns, thus creating a spread of urban development to less developed regions. In fact, the hierarchy established can ensure where the priority for development is supposed to take place. With several new town hierarchies in regional development areas such as in Pahang Tenggara, the average travel distance to the new centers will be much less than to the existing town which is 30 to 50 miles away.

The non-hierarchical category of new town is a new town located on the fringes of the metropolitan areas (suburban new town). Non-hierarchical new towns do not indicate ranking by town size. The size of the suburban new town is determined by the direction of economic growth in the respective urban area.

Location is the other factor which influences the size of various new towns. Generally, new towns located within the urban area, either in the metropolis or on the fringes of metropolitan areas, are much larger in their population size than the new towns of rural areas. (Mohamad, 1983, p.350) Table 4.4 displays the size comparison of selected new towns across the country. As shown, new towns-in-town and suburban new towns

are designed to have a total population between 100,000 and 280,000 people, whereas the rural new towns are planned for different sizes ranging from 5,000 people as a resource base center to 70,000 people as a regional center. Therefore, the population size is directly related to the location of new towns. Larger size new towns are generally located in the urban areas, while smaller size new towns are in the rural and undeveloped areas.

Table 4.4. Size Comparison of Selected New Towns by Location.

Category/New Town	Planned Population
New Town-in-town	
Bandar Tun Razak	100,000
Bukit Jalil	120,000
Suburban New Town	
Bangi	100,000
Bayan Lepas	150,000
Shah Alam	260,000
Rural New Town	
Bandar Muadzam Shah	70,000
Bandar Pusat	50,000
Bandar Penawar	34,000
Bandar Tenggara	27,000
Resource Base New Town	
Kerteh	36,000

Source: Kuala Lumpur City Hall. Kuala Draft Structure Plan. 1982.
 Ngah,Ibrahim. Socioeconomic Profile of KEJORA's New Towns. 1987.
 Sulong, Mohamad. Perancangan Bandar Baru, DEB, dan Pembangunan Negara (New Towns Planning, New Economic Policy, and National Development). October 24-25, 1983

Clearly, urban new towns are planned for larger size due to the nature of the urban environment. To fulfill the purpose of the new town and also to accommodate the expansion of population growth, the size factor must be taken into consideration when planning the town in order to meet the residents demand for a variety of services. According to Malaysian standards on the size of towns, many of the rural new towns are an intermediate and small size towns. The size of a new town plays an important role in developing lagging territories. Planning for a rural new town is scaled to agro-based kinds of activity serving specific sections of the population. Focusing on intermediate size towns avoids the concentration of bigger towns, thus encouraging the development of towns which are more balanced in terms of rank size distribution. This could enhance even growth, development of people, and economic activity in regional development areas.

Land use is a major component of new town planning. The pattern of land use in the new town is a reflection of competition for sites between various uses through supply and demand. In this section, the way the new town allocates land uses is discussed and an evaluation is undertaken to examine the impact of land use plans on the design principles. This gives some generalizations as to how major land uses are allocated with respect to location criteria.

Detailed data for every aspect of land use in every new town are difficult to compile. Due to this drawback, a few examples of new towns will be used as an illustration. Based on an evaluation of various

urban and rural new towns, notably the new town of Bangi, Shah Alam, Bandar Pusat, Bandar Penawar, and Bandar Tenggara, the land use layout is typical of many modern new towns. Residential areas occupy the largest volume of acreage in new towns. Land for residential areas ranges from 30 to 50 percent of the town's total acreage. About 5 to 15 percent of the land is used for industrial areas, 2 to 5 percent for commercial areas. Other types of land uses are determined according to their importance and to the functional characteristic of the town. (Table 4.5) A new town, which has a specific purpose, such as Shah Alam as a state capital, Bangi as a district

Table 4.5. Land Use Comparisons in Selected New Towns.

Land Use Elements	Shah Alam		Bangi		Bandar Pusat	
	acres	%	acres	%	acres	%
Residential	10,121	30.4	1,428	35.8	1,500	50.0
Industrial	2,991	9.0	550	13.8	450	15.0
Office/Institutions	1,494	4.5	860	21.6	300	10.0
Commercial	900	2.7	75	2.0	150	5.0
Education	1,852	5.6	170	4.3	-	-
Open Space and recreational use	11,491	34.5	600	15.0	300	10.0
Utilities and Others	4,416	13.3	300	7.6	300	10.0
Total	33,265	100.0	3,983	100.0	3,000	100.0

Source: Mahesan T. Development of New Towns and Redevelopment of Urban Areas in Peninsular Malaysia. March 19 - 25, 1985.
 Mohamad S. Felda Settlement: Urban and regional Planning Perspectives. 1985.
 Selangor State Development Corporation. Revised Studies of Bangi New Town Structure Plan. 1982.

center, and Bandar Pusat, a regional center, demonstrate larger proportion of some uses of land than the others. Shah Alam, to enhance environmental and aesthetic qualities, allocates a large segment of land for open space and recreation. In Bangi, office /institution (institution refers to a technical training center) types of land uses are in greater proportion next to residential area.

There is not much difference in the plan and design concept of new towns between the suburban and rural new towns. Although all the new towns have an overall similarity in appearance, each one has its own individual character due to the location and topography in which it is located as well as the task for which it functions. A good design of a new town can determine the success of the town in terms of attracting various groups of people, commerce, and industry to invest in the community.

The overall structure of a new town in Malaysia basically follows a linear development concept. (Refer to structure plan of Bangi, Shah Alam, Bandar Penawar, and Bandar Pusat in Appendix A) Based on several structure plans, each of the new towns defines distinct areas for home, work, and play. The residential areas are constructed as a neighborhood unit. The number of neighborhood units varies from one town to the other. Commonly, the urban new towns have more neighborhood units which are smaller in size than those of rural new towns, which have a few neighborhood units but are larger. Each neighborhood unit is provided with basic facilities such as a religious building, school, play area, and local shopping facilities. The structure plan clearly differentiates

between industrial areas and residential areas. Industry is planned adjacent to major transportation networks. Industrial areas in Bangi and Shah Alam are located next to railroads and federal highways, which then are connected to residential areas by secondary roads. In the new towns of Bandar Penawar and Bandar Pusat, the areas for industry are adjacent to regional roads. A comparison can be made with regard to the allocation of industrial use. The land for industrial areas in new towns of Regional Development Authority is smaller than the allocation of industrial land for suburban new towns. The reason is that the scope and types of industry in rural new towns is limited. In rural areas, most of the industries are related to local resources, especially rubber and coconut palm oil. In suburban new towns, types of industry range from light manufacturing to heavy industry. A very distinct feature of every new town is the land allocated for commercial establishments. Commercial areas are often identified by a town center, which is centrally located in the new town. To date, the development of town centers is quite slow. For example, Bangi town center was supposed to have begun construction a few years ago, yet only the land has been cleared. Another example is Bandar Pusat in Jengka Triangle, where construction of the town center was only begun a few years ago even though the town was started in 1970.

Circulation systems are an important facet of new town development. The roads are designed in a hierarchical network, and separation of pedestrians and vehicles is provided. The use of pedestrian and cycle paths is encouraged within neighborhood units and throughout the

town. The movement system is designed through hierarchical networks to allow for easy access linking residential areas to the town center, local center, community facilities, and work places. Separated foot and bicycle paths ensure the safety of the pedestrian. Provision of public transport in the suburban new towns is greater than in the rural new towns, because of the demand for public transit. One of the major criteria in new town planning is the provision for open spaces and greenbelt areas. The plans for all new towns allows retention of large green areas to give spaces for landscaping and planting of suitable trees for aesthetic reasons. There is a buffer of greenbelts separating industrial areas from residential and also between one residential area and another.

The design principles of Bangi, Shah Alam, Bandar Penawar, Bandar Tenggara and Bandar Pusat are very similar to one another, but due to location factor and individual characteristics, there are differences in their physical layout. The nature of economic activity between Bangi and Bandar Tenggara show a dissimilarity, where in Bangi the type of manufacturing is mainly light manufacturing such as wearing apparel and footwear, furniture and fixtures, and paper products. On the other hand, Bandar Tenggara's main activity is rubber and coconut palm tree plantations with processing of agricultural products. In terms of housing type, Table 4.6 shows that rural new towns, in this case Bandar Tenggara, consist of a greater percentage of detached houses as compared to the suburban new towns, such as Bangi. Although variations in dwelling types are provided,

Table 4.6. Provision of Housing Development in Bangi and Bandar Tenggara (1978 and 1980)

Dwelling Types	Percentage Units to be Built	
	Bangi (phase 1, part 1) 1978	Bandar Tenggara (phase 2) 1980
Detached	10.3	28
Semi Detached	6.4	22
Link House	18.9	n.a*
Terrace House	64.4	35
Medium Rise Apartment	n.a*	15

Note: * not available

Source: Selangor State Development Corporation. Revised Studies of Bangi New Town, 1982.

Rahman, M. "New Towns in Malaysia: Problems, Failures and Achievements." In Urban Innovation Abroad, 1984.

houses within the rural new towns usually have larger lot sizes except medium rise apartment. Because of this, the housing density is lower than in suburban new towns. Due to the high cost of land in the urban areas, for example, Bangi new town has a higher housing density, and terrace houses are the major dwelling types to be built (Table 4.6). Furthermore, the roads in rural new towns are not as wide as roads constructed within the urban new towns since there is less demand for vehicle movement in rural areas.

Conclusion

This chapter has identified and examined four types of new towns and two components of new town structure. Both the size and land use

component to some extent determine the new towns development pattern. Size of new towns varies considerably with respect to location of the town. Location influences the physical development of the town. Although the same design principles are applied, the characteristics of individual areas along with the demographic criteria, make the suburban and rural new towns dissimilar in their level of social and economic activities.

CHAPTER V

THE EVALUATION OF NEW TOWNS DEVELOPMENT

This chapter, the central focus of the thesis, is an evaluation of the four major questions below;

1. To what extent do new towns contribute to reshaping and redistributing the pattern of urban areas in Malaysia?
2. How effectively does new town policy accomplish the overall goal of regional development to reduce imbalances among regions and states in Malaysia?
3. To what extent do new towns in general achieve the overriding objective of restructuring the society?
4. Generally, how successful has the new town program been in achieving targeted plans and projections during the twenty-year period of the New Economic Policy?

A total of 50 new towns are currently in various stages of implementation. The lists of several new towns being developed in different states are as follows:

Selangor

Bangi
Shah Alam
Subang Jaya (satellite city)

Petaling Jaya

Federal Territory (new towns-in-town)

Hawthornden
Sentul
Bandar Tun Razak
Bukit Jalil
Penchala/Segambut

Penang

Bayan Lepas
Bagan Serai

Negeri Sembilan

Senawang (satellite city)

Pahang

Bandar Pusat
Bandar Muadzam Shah
(16 other new towns in DARA)

Kelantan

Gua Musang

Johore

Bandar Tenggara
Bandar Penawar
Bandar Mas
Senai
Pasir Gudang

Terengganu

Kerteh
Bukit Besi
Cheneh Baharu
Cherul
Al Muktafi Billah-Shah
Ketengah Jaya

The planning of 50 new towns within the last two decades in Malaysia has demonstrated the importance of such effort to improve the well-being of the nation. Even though the new towns were only constitute a part of the urban development program, with so many new towns being developed, one can expect a variety of impacts.

Urban Growth and Regional Development

Peninsular Malaysia's population over the past twenty years showed increase urbanization. The total urban population grew from 2.53 million people in 1970 to 5.91 million people in 1985. (Fifth Malaysia Plan,

1986, p.184) By 1985, 37.4 percent of the total population lived in urban areas compared with 28.8 percent in 1970. The urban population grew by 5.8 percent per annum during the period between 1970 and 1985. The growth of urban population in Malaysia can be regarded as further increase in urbanization. However, there was no indication where the population growth was concentrated and how the new towns have contributed to the increase of urban growth.

Table 5.1 displays the distribution of urban population by regions and states in Peninsular Malaysia. As shown in the table, the central region has the largest share of urban population. This region had 38 percent and 40 percent of urban population respectively in 1980 and 1985. The agglomeration is largely comprised of Selangor and Federal Territory (Kuala Lumpur), and together they have the largest share in urban population. Other regions have also become increasingly urbanized as a result of the spread of urban development, especially in the eastern and southern regions. However, the northern region had a lower urban growth rate, partly due to outmigration. Although this region was dominated by two large urban centers, Georgetown in Penang and Ipoh in Perak, the state of Perlis and Kedah in this region are the least urbanized states in the country which provide for a wide difference in urbanization levels for the northern region. This was another reason for lower urban growth rate of northern region.

Table 5.1. Peninsular Malaysia: Distribution of Urban Population ('000)

Region/State	1980		1985		Percent Urban		Avg. annual growth rate 1981-1985
	Urban	Total	Urban	Total	1980	1985	
Northern							
Kedah	1,220.7	4,039.9	1,404.1	4,360.4	30.2	32.2	2.8
Perak	162.5	1,120.6	183.9	1,210.9	14.5	15.2	2.5
Perlis	589.8	1,812.3	637.4	1,934.6	32.5	32.9	1.6
Penang	13.2	148.8	16.4	165.1	8.9	9.9	4.3
	455.2	958.2	566.4	1,049.8	47.5	54.0	4.4
Central							
Malacca	1,803.4	3,545.1	2,332.5	4,092.6	50.8	57.0	5.1
N.Sembilan	109.5	466.6	114.4	492.5	23.5	23.2	0.9
Selangor	188.5	575.9	232.8	625.4	32.7	37.2	4.2
Fed.Territory	524.4	1,521.6	832.7	1,822.1	34.5	45.7	9.2
	981.0	981.0	1,152.6	1,152.6	100.0	100.0	3.2
Eastern							
Kelantan	695.9	2,243.1	858.6	2,661.8	31.0	32.3	4.2
Pahang	250.1	897.8	305.7	1,026.3	27.9	32.2	4.0
Terengganu	211.9	802.2	253.9	998.7	26.4	25.4	3.6
	233.9	543.1	299.0	636.8	43.0	47.0	4.9
Southern (Johore)	584.5	1,644.9	731.2	1,854.0	35.5	39.4	4.5
Malaysia*	4,753.2	13,879.2	5,912.2	15,791.1	34.2	37.4	4.4

Note: * includes East Malaysia, Sabah and Sarawak.

Source: Government of Malaysia. Fifth Malaysia Plan, (1986-1990), 1986.

There are differences with regard to the level of urbanization experienced by states in the 1980 to 1985 period. As indicated in Table 5.2, Terengganu (which is located in the eastern region) outranks the states of Selangor and Johore with 43 and 47 percent of its total population in urban areas in 1980 and 1985 respectively. Urban growth was prominent in coastal Terengganu, especially in the state capital, Kuala Terengganu, and within the small urban centers of Kemaman and Dungun, which performed the role of service centers for petroleum and natural gas activities. (Fifth Malaysia Plan, 1985, p.183) Moreover, Penang ranks second

Table 5.2. Percentage of Urban Population and Ranking by State

State	1980		1985	
	%	Rank	%	Rank
Fed. Territory	100.0	1	100.0	1
Penang	47.5	2	54.0	2
Terengganu	43.0	3	47.0	3
Johore	35.5	4	39.4	5
Selangor	34.5	5	45.7	4
N. Sembilan	32.7	6	37.2	6
Perak	32.5	7	32.9	7
Kelantan	27.9	8	29.8	8
Pahang	26.4	9	25.4	9
Melaka	23.5	10	23.2	10
Kedah	14.5	11	15.2	11
Perlis	8.9	12	9.9	12

Source: Government of Malaysia. Fifth Malaysia Plan, 1986-1990, 1986.

in the percentage of urban population due to immigration of northern people and concentration of large scale manufacturing activities in this state. A similar situation exists in the state of Johore and Selangor where the

main focus of growth is in Johore Bharu, the state capital and Klang Valley area. The level of urbanization shows some gains. The less developed states such as Terengganu in the eastern region have become more urbanized. However, the urban growth tends to concentrate in the state which constitute the higher percentage of urban population in their respective region.

Plans have been implemented to spread urban growth to less developed regions. As a result, the number of urban areas has increased. By 1980, 59 towns have passed the threshold level of 10,000 people compared to 46 towns in 1970. As displayed in Table 5.3, over the last decade there was an increase of 13 new urban areas. Table 5.3 lists the states in Peninsular Malaysia with the number of urban areas. Johore with 11 urban areas in 1980 replaced Perak as the state having the largest number of urban centers. This increase has been associated with the growth of small urban centers especially Kulai, Mersing, Pontian Kecil, Kota Tinggi, and Labis. (Table 5.5) These centers are dispersed throughout the state of Johore. Johore also experienced a growth of intermediate size urban centers. Out of 25 towns size 25,000 to 100,000 people in Peninsular Malaysia, Johore has the largest number of urban centers in this category.

The less developed states of Kelantan, Terengganu, Pahang, Kedah, and Perlis had a total of five urban centers added to their original fifteen. As shown in Table 5.3. Terengganu, which ranked third in the percentage of urban population, did not gain additional urban centers. The growth of urban areas for this state is largely attributed to Kuala

Terengganu with a substantial growth rate of 13.3 percent and Dungun with 5.1 percent (Table 5.5). For Kelantan and Pahang, the additional urban centers are due to Kuala Krai, Kadok, and Kuala Lipis passing the urban center population level. Significant urban growth of Jitra and Kangar have contributed to the additional number of urban centers in Kedah and Perlis. For Selangor, two additional urban areas are the result of the new town of Shah Alam and Kuala Kubu Bharu passing the urban area threshold level. (Table 5.5)

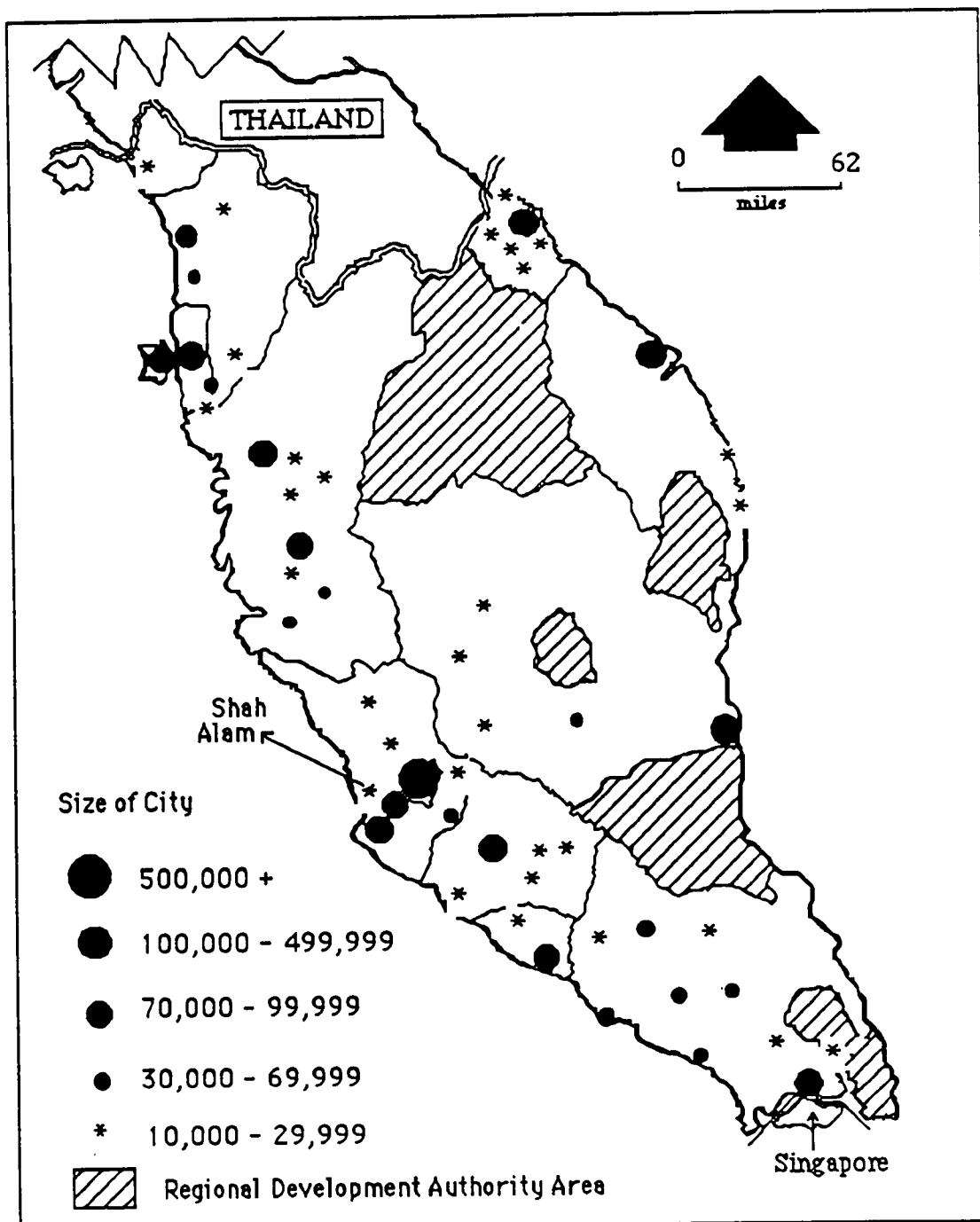
Table 5.3. Number of Urban Areas in 1970 and 1980.

State	1970	1980	Increase
Fed. Territory	1	1	-
Perak	8	8	-
Penang	5	6	1
Johore	7	11	4
Selangor	5	7	2
Terengganu	3	3	-
Kelantan	5	7	2
Pahang	4	5	1
N. Sembilan	3	4	1
Melaka	2	2	-
Kedah	3	4	1
Perlis	-	1	1
Total	46	59	13

Source: Maarof, Annuar. Towards National Urbanization Policy and Strategy. December 1 - 3, 1981.

In terms of spatial distribution of urban areas, Figure 5.1 graphically illustrates the distribution of towns above 10,000 people. As shown in the figure, the developed states still possess the largest number of urban centers. In the less developed states, urban centers are mainly distributed along the coastal area and a few in the hinterland of Pahang. New towns have not been identified as urban centers except for the new town of Shah Alam. (Figure 5.1) In reshaping the existing pattern of urban areas, the new towns have provided only a marginal impact on the growth of urban areas in Peninsular Malaysia. The pattern urban development has not been commensurate with the development of new towns.

Table 5.4 shows the rate of urban growth according to city size for 1970 and 1980. There is a relationship between the rate of urban growth and city size. Cities of 100,000 people and greater experienced significant urban growth rates between 1970 and 1980. Meanwhile, the rate of urban growth for intermediate size cities with populations between 25,000 and 100,000 people declined over the same ten-year period. This is because certain urban centers and state capitals, which in 1970 were under the category of intermediate size cities, have grown substantially and become large urban centers, notably Petaling Jaya, Kuala Terengganu, Kota Bharu, Kuantan, and Seremban. Overall these cities have urban growth rates greater than five percent annually (Table 5.5). Conversely, most of the towns of intermediate size have slower urban growth rates, less than three percent annually. This is true for cities such as Butterworth, Melaka, Alor



Source: Rostam, Katiman. Pertumbuhan Bandar-Bandar Serta Beberapa Implikasinya Terhadap Dasar dan Strategi Pembangunan Bandaran di Semenanjung Malaysia. (The Growth of Towns and Its Implications on Policies and Strategies of Urbanization in Peninsular Malaysia. October, 1983.

Figure 5.1. Distribution of Cities Above 10,000 People, 1980.

Table 5.4. Rate of Urban Growth by City Size. ('000)

City Size	1970 Total Population	Annual Growth Rate(%)	1980 Total Population
250,000 +	451.8	13.0	1532.3
100,000 - 249,999	666.9	8.0	1443.6
25,000 - 99,999	912.7	-2.2	731.6
Less than 24,999	351.3	4.2	527.5
Total	2,382.7		4235.0

Source: Rostam, Katiman. Pertumbuhan Bandar-bandar Serta Beberapa Implikasinya Terhadap Dasar dan Strategy Pembangunan Bandaran di Semenanjung Malaysia. (Growth of Urban Areas and Its Implications to Urbanization Policy and Strategy in Peninsular Malaysia. October 24-25, 1983.

Star, Muar, Telok Intan, Kajang, and Bukit Mertajam. Small urban centers with less than 25,000 people generally have moderate urban growth with a few cities drawing substantial growth, however, the majority have less than a two percent annual growth rate. (Table 5.5)

Urbanization rates have tended to be greatest in the largest urban areas. This is explained by the tremendous growth of urban centers over 100,000 population. Small size urban centers grew only slowly. In fact, some of the small urban centers actually declined. A similar situation exists for the intermediate size cities where the rate of urban growth has also been declining.

Table 5.5. Cities Above 10,000 People in Peninsular Malaysia

City	Total Population ('000)		Annual Growth Rate
	1970	1980	
Kuala Lumpur	451.8	981.0	8.1
Ipoh	247.9	300.7	2.0
Georgetown	169.2	250.6	4.0
Johor Bharu	136.2	249.9	6.3
Petaling Jaya *	93.4	218.3	8.9
Klang	113.6	196.2	5.6
Kuala Terengganu	53.3	186.6	13.3
Kota Bharu	55.1	170.6	12.0
Taiping	54.6	149.2	10.6
Kuantan	43.3	136.6	12.2
Seremban	80.9	136.2	5.4
Melaka	87.2	88.1	0.1
Butterworth	61.2	76.6	2.3
Alor Star	66.2	71.7	0.8
Batu Pahat	53.1	66.0	2.2
Muar	61.2	65.8	0.7
Kluang	44.0	51.8	1.7
Telok Intan	44.5	49.7	1.1
Sungei Petani	36.0	46.0	2.5
Ayer Hitam	25.6	36.5	3.6
Segamat	17.6	34.5	7.0
Mentakab/Termeloh	17.4	31.2	6.0
Kajang/Sg. Chua	22.0	29.3	2.9
Dungun	17.6	28.9	5.1
Bukit Mertajam	26.6	28.4	0.7
Kulim	18.5	27.1	3.9
Kampar	26.5	24.9	-0.6
Kulai	11.8	24.5	7.1
Shah Alam *	-	24.1	-
Port Dickson	10.3	24.0	8.8
Sungai Siput	21.4	23.9	1.1
Bentong	22.6	23.5	0.4
Raub	18.4	23.2	2.3
Pangkal Kalong	14.4	22.6	4.6
Pontian Kecil	8.3	21.0	9.7
Bukit Baharu	14.3	17.6	2.0
Serdang Baru	13.9	16.7	1.8
Kemaman (Chukai)	12.5	15.9	2.4
Kuala Kangsar	15.3	14.6	-0.4
Tanjong Tokong	12.3	14.4	1.6
Peringkat	11.8	14.2	1.9
Mersing	7.4	13.9	6.4
Jitra	4.2	13.8	12.6
Pasir Mas	11.2	13.7	2.0

(Continued)

City	Total Population ('000)		Annual Growth Rate
	1970	1980	
Kota Tinggi	8.7	13.6	4.6
Tangkak	12.3	13.4	0.9
Tumpat	10.7	13.1	2.0
Kangar	8.8	13.0	4.0
Kuala Krai	2.6	12.7	17.0
Batu Gajah	10.7	12.7	0.1
Ampang	11.1	12.6	1.3
Kuala Pilah	12.5	12.6	0.1
Pokok Asam	10.7	12.3	1.4
Kadok	9.3	12.0	2.6
Labis	9.4	10.9	1.5
Tanjong Bunga	8.9	10.9	2.1
Bahau	9.1	10.5	1.5
Kuala Kubu Baru	8.7	10.4	1.8
Kuala Lipis	9.3	10.3	1.0

Note: * Planned New Town

Source: Rostam, Katiman. Growth of Urban Areas and Its Implications to Urbanization Policy and Strategy in Peninsular Malaysia. October 1983.

Of the 59 urban areas in Peninsular Malaysia (Table 5.5), only two are planned new towns. Although Petaling Jaya is considered a new town, this town is not a part of the new town program because it was constructed before the national plan was adopted. Therefore, only Shah Alam, a planned new town, is considered a new urban center in 1980. Even though there are at least 48 other new towns, they have not achieved the 10,000 population threshold level required for an urban area. An examination of the listing of urban areas in Peninsular Malaysia suggests that new towns do not contribute to the increase of urban centers. Thirteen additional urban centers are the result of expansion within existing small towns, and not as a result of new towns. Furthermore, an increase in the urban population in Malaysia is largely confined to certain parts of the nation, particularly within the state capitals and metropolitan areas. The pattern of urban growth is concentrated in two level growth centers - Kuala Lumpur/ Petaling Jaya/ Klang, Ipoh, Georgetown, and Johore Bharu (first level urban centers) which are the metropolitan areas; and Kuala Terengganu, Kuantan, Kota Bharu, and Seremban, (second level urban centers), the states capital of Terengganu, Pahang, Kelantan, and Negeri Sembilan. The continuation of this urban growth pattern will have a negative impact on the outlying areas. The development of new towns in regional development areas will more likely be affected by the continuous growth of metropolitan areas and state capitals. Despite overall accomplishments in urban development, new towns have not been one of the reasons for growth since new towns comprise approximately less than 5 percent of the country's urban population.

The regional development scheme has to some extent, successfully contributed to reducing the flow of surplus rural population to urban areas but has not yet contributed to increasing the distribution of urban activities in the poor states. (Awang, 1984, p.255) "The economic structure vis-a-vis population composition of the poor states still reflects more than an average imbalances with respect to the distribution of urban centers and industries."(Awang, 1984, p.255) This is not to say that there have been no improvements with regard to the implementation of regional development aimed at reducing regional imbalances. All four regions in Peninsular Malaysia have experienced growth over the last ten years. The Gross Domestic Product (GDP) per capita for each region also grew over the years. Progress in raising the levels of economic activities and income of the population of each state is reflected in the changes in GDP as indicated in Table 5.6. Generally, the pattern of imbalances has not been narrowed to a significant extent; however, the progress is encouraging.

The decade of the 1970's marked the beginning of the period of extensive efforts in the construction of new towns especially in the rural areas. After almost twenty years of implementation, the progress of new towns within the regional development schemes has not measured up to expectations. There are five Regional Development Authorities (RDAs) which are responsible for the creation of rural new towns. According to the Master Plan for each development authority, by 1990 the five RDAs were supposed to have 66 new towns: 31 in Pahang Tenggara Development Authority (DARA), which were planned to accommodate 337,570 people; 18 in

Table 5.6. Peninsular Malaysia: Gross Domestic Product by Region and Industry of Origin, 1980 and 1985 (\$ million in 1978 prices)

Sector	Region				Total*
	Northern	Central	Eastern	Southern	
Agriculture, forestry livestock, & fishing	2,789 3,108	1,602 1,908	2,170 2,812	1,615 1,735	10,189 12,046
Mining & quarrying	1,180 1,093	853 763	996 1,476	118 175	4,487 6,006
Manufacturing	2,357 2,864	4,565 5,767	534 703	1,109 1,379	8,932 11,357
Construction	431 634	849 1,165	232 411	200 332	2,066 3,048
Electricity, gas, & water	151 240	286 419	70 109	54 87	640 988
Transport, storage & communication	654 922	1,141 1,686	224 359	225 390	2,542 3,805
Wholesale and retail trade, hotels, & restaurants	1,196 1,469	2,785 4,059	370 539	473 696	5,383 7,551
Finance, insurance, real estate, & business services	937 1,244	1,562 2,323	428 567	359 501	3,687 5,212
Government services	1,154 1,790	1,746 2,774	654 1,105	459 722	4,563 7,270
Other Services	238 291	534 706	83 120	70 86	1,021 1,312
Total	11,087 13,655	15,923 21,570	5,761 8,201	4,682 6,103	43,510 58,595

Note: * Including Sabah and Sarawak in East Malaysia.
The numbers in bold are for 1985.

Source: Government of Malaysia. Fifth Malaysia Plan, (1986-1990), 1986.

Johore Tenggara Development Authority (KEJORA), for a population of 161,400; 7 in Terengganu Tengah Development Authority (KETENGAH) with a plan for 91,900 people; 7 in Kelantan Selatan Development Authority (KESEDAR) for more than 70,000 people; and 3 in Jengka Triangle for a planned population of 80,000. As indicated in Table 5.7, only 54.5 percent (that is, a total of 36 new towns) were actually constructed: 17 in DARA; 12 in KEJORA; 5 in KETENGAH; 1 in KESEDAR; and 1 in Jengka Triangle. On the average, only the first phase of each new town was completed by 1983. (Awang, 1984, p.253-254) By 1980, only 91,213 (12.3 percent) people were residing in the new towns of the RDAs. By 1985, the new town's population had a 13 percent increase from 1980, with a total population of 188,276 people. Even though the new towns of the RDA are making progress, it is unlikely they will be able to attract another 74.7 percent of the expected new residents by 1990.

During the early and middle 1980s, Malaysia experienced an economic recession which has affected every aspect of development programs, including the new towns. Even though the recession impaired the growth of new towns in general, other reasons also have influenced the progress of new towns.

The slow progress of rural new towns can be traced to the individual development authority. Table 5.7 shows that Jengka Triangle, the oldest Regional Development Authority, managed to build only one new town (Bandar Pusat), which housed 4,129 people in 1980 and 4,700 people in 1985. Bandar Pusat represents 3.1 percent (1980) and 3.2 percent (1985) of the total

Table 5.7. Total Urban * and Rural Population of Regional Development Authority Area, 1980 and 1985

RDA	Planned Number of New Towns	Projected Population by 1990	Actual Number of New Towns	Achievement					
				1980		Total	Urban		1985**
				Urban (%)	Rural (%)			Urban (%)	Rural (%)
DARA	31	337,570	17	35,979 (39.2)	55,798 (60.8)	91,777	76,956 (54.6)	64,109 (45.4)	141,065
KEJORA	18	161,400	12	30,974 (28.8)	76,671 (71.2)	107,645	52,023 (22.8)	175,777 (77.2)	227,800
KETENGGAH	7	91,900	5	1,877 (2.6)	69,150 (97.4)	71,027	25,432 (28.3)	64,562 (71.7)	89,994
KESEDAR	7	72,300	1	18,254*** (12.5)	127,699 (87.5)	145,953	29,165*** (15.1)	164,511 (84.9)	193,676
JENGKA	3	80,000	1	4,129 (3.1)	128,339 (96.9)	132,468	4,700 (3.2)	142,100 (96.8)	146,800
Total	66	743,170	36	91,213	465,765	548,870	188,276	611,059	799,335

Note: * The term 'urban' as used in Regional Development Authority area include the total population in the new towns and new settlement centers.

** Estimates

*** Figure include the four expanded towns in KESEDAR.

Source: Government of Malaysia. Fifth Malaysia Plan, (1986-1990). 1986.

number of residents in Jengka Triangle. When compared with the rural population, it is clear that in Jengka Triangle, the percentage of people living in the hinterland of the regional development area is much greater than in the new town. There is still approximately 97 percent of the population residing in rural areas.

The population build-up for other new towns in the RDA have also not been accomplished. In DARA about 35,979 (39.2 percent of the total DARA's population) people reside in the 17 new towns built in the region. In terms of its planned population, DARA has been able to achieve only one-tenth of the new town's target population for 1990. Until 1985, the new towns in DARA showed some progress. The urban population increased to 15.2 percent with 76,956 people distributed within 17 new towns. On the average only about 4,562 persons were living in these 17 new towns.

On the other hand, in KEJORA the percentage of urban population decreased in the time period between 1980 and 1985. Despite the increase in the number of people residing in the new towns of KEJORA, it appears that migrants have been attracted to the rural areas. The percentage of people living in rural areas has been increasing, whereas the percentage of urban population has been declining. This indicates that the new towns in the area have not been successful in attracting newcomers.

In KETENGAH, by 1980 only 1,877 people reside in five new towns built in this region. Even though only 2.6 percent of the total population lived in these new towns, by 1985 the percentage of new towns'

resident increase 28.3 percent. The estimated population of all five new towns in 1985 is 25,432 people. This increase was the highest of all the five RDAs reviewed. Although a greater concentration of people are in urban areas, there is still a large portion of people living in rural areas.

KESEDAR developed its new town based upon an expanded town concept. Until 1985, only 15 percent of the region's population were considered urban. The lack of attraction to the new town is due to the remote location of the town in central Kelantan, along with slow development of necessary infrastructure.

All 36 RDA's new towns and new settlement centers failed to attract the number of migrants projected. Relatively poor population growth was correspondingly reflected in the generation of employment opportunities. Out of 270,349 planned employment opportunities to be developed, only 46,981 jobs (17 percent) had occurred by 1983. (Awang, 1984, p.254) Growth of manufacturing employment opportunities which were planned to complement agricultural jobs has not been impressive. Only 5 factories have located on the 692 acres provided for industrial development in seven new towns. (Awang, 1984, p.254) Manufacturing industries have not been growing in spite of a variety of programs designed to attract outside investors. The flow of industries which was expected due to infrastructure improvements did not materialize. Lack of growth in industrial establishments stems from a variety of causes. Currently, all the industries located in the RDA's new towns are government-owned industries. The private sector prefers to invest in areas outside RDAs which offer more

advantages. Even though there are incentives provided for new industries, they have not stimulated industrial development in the RDA areas. It is difficult to persuade urban-oriented investment interests to locate in the rural new towns because of lack of readily available skilled workers, inadequate ancillary services, and physical isolation of the new towns within the RDA areas. The reluctance of industrialists to invest in the new towns is also attributed to the slow development of transport facilities and communication facilities along with delays in approvals in the processing of application from investors.

The slow population growth in rural new towns compounds other development factors. With regard to the development of housing and commercial establishments, these sectors are lagging behind the intended plans. Within the KEJORA, DARA, and KETENGAH regional development areas, only 14 percent of the originally scheduled housing and 13 percent of the commercial development were built. (Lee, 1987, p.165)

To date, the rural new towns which had been developed by the Regional Development Authority have not met expectations. Many rural new towns have become almost closed subsystems which are "virtually incapable of generating the local demand and the basic dynamism to boost growth." (Lee, 1987, 165) The Regional Development Authorities have failed to plan or properly anticipated the growth of population in their new towns. The RDAs have a broad multi-function responsibilities. Their multi-tasks responsibilities detract the RDAs from being comprehensive in their plan. (Awang, 1984, p.254) Therefore, this cause the slow growth in RDA's plans.

Lack of management and lack of control over a variety of development factors have led to the sluggish growth. (Lee, 1987, p.165) Depending on migrations to stimulate development of new towns is not realistic. This is not a natural migration where people usually move to rural areas. Instead, it is a planned migration to direct people not to move to urban areas. This tends to slow down the process of the movement of people. Even though resources are available for industrial development, other secondary and tertiary sectors are not growing. This reduces the attraction of the new town.

Elsewhere in Malaysia, particularly around Georgetown and Johore Bharu, suburban new towns have also been constructed. Due to the importance of Klang Valley in the national development, it is important to examine the growth of the new towns in this region.

Currently, there are four new towns in Klang Valley. This includes the satellite new town of Subang Jaya, which is basically a large housing project and not a complete new town. The suburban new towns referred to are Bangi, Shah Alam, and Petaling Jaya. With respect to the population growth of these new towns, the projected populations for two of the new towns, namely Bangi and Shah Alam, are too high to be reached by 1990. This is because, as displayed in Table 5.8, both Bangi and Shah Alam represent a very small portion of Klang Valley's population. On the other hand, Petaling Jaya, the oldest new town, has become successful at attracting migrants. Overall, the three major new towns comprise less than 15 percent of the total population for the region in 1980. Among the

Table 5.8. Klang Valley New Town's Population Distribution

New Town	Planned 1990 Population	Actual Population 1980	% of 1980 Klang Valley's Population
Bangi	100,000	2,100	0.1
Shah Alam	200,000	24,100	1.2
Petaling Jaya	280,000	218,300	10.8
Total Klang Valley	2,659,500	2,019,800	

Source: Megat Said, Megat Adlan. New Towns Development: The Experience of Selangor State Development Corporation. December 18 -20,1978.

Lee Boon Thong. "New Towns in Malaysia: Development and Planning policies." In New Towns in East and South east Asia,1987.

new towns, only Petaling Jaya is expected to reach its planned population. This town is the fifth largest city in Malaysia with an average annual growth rate among the highest in the country.

Other aspects of developments such as attracting manufacturing industries to the suburban new towns have been progressing satisfactorily. There are a variety of employment opportunities in the new towns which provides employment for more than 180,000 people. Manufacturing growth, however, has outpaced the provision of housing and shopping facilities. The suburban new towns lack low cost housing and have limited shopping facilities and other social amenities. Low cost housing is insufficient to meet the needs of factory workers in the Klang Valley new towns.

Mature suburban new towns in Malaysia are very scarce.

There is only Petaling Jaya. Even though Shah Alam was initiated in 1964, it was not developed until 1970. There are several reasons why the suburban new towns have not yet achieved their target populations despite the tremendous growth of Klang Valley. The slow growth of suburban new towns is due to the fact that demand for urban expansion is for residential areas. Residential development within the urban areas is generally the responsibility of the private sector, which avoids areas remote from existing infrastructure because of the costs associated with providing such infrastructures. Therefore, the development of suburban new towns depends very much on government initiatives, which often encounter bureaucratic problems. The continuous growth of urban areas has led most towns' growth to take the form of infilling, piecemeal additions using on existing lines of infrastructure, or, at the most, development of large housing estates on the periphery of existing towns. (Buyong, 1978,p.8) The result is that suburban new towns are growing slowly.

Economic and functional independence of suburban new towns is planned but not always successful. Integration with Kuala Lumpur and other existing towns remains strong in spite of efforts to develop independent communities. People who migrate to Klang Valley often have jobs in Kuala Lumpur or existing towns. They moved to the city because of better opportunities. They ended up commuting to work rather than living and working in one place when they could not find housing near the work

place. Therefore, the slow development pace in the new towns turned these suburban new towns into dormitory areas for a metropolitan middle class.

New Town Development and Progress

New town development has had very little impact at national and regional levels. The remaining investigation will focus on new towns in terms of their effect on several socioeconomic variables.

None of the new towns in Malaysia have reached the planned 1980 and 1985 population projections. Neither the suburban new towns nor the rural new towns have achieved 50 percent of their population size projected for 1990. Both Bangi and Shah Alam are short of their planned population for 1980 and 1985. The new town at Bangi was projected to have 26,000 people by 1985, but the population reached only 10,000 people. This is only 10 percent of the expected population after more than 10 years of development. A similar situation exists in Shah Alam where only 70,000 people resided in the new towns in 1985 compared to a projection of 114,000 people for 1980. After more than 20 years, this new town has been able to reach only 35 percent of its intended population. Rural new towns also fall short of their projected population. Some of the towns were unable to attract even 10 percent of the projected population, such as Bandar Pusat, Bandar Muadzam Shah, and Bandar Penawar. While other new towns such as Bandar Tenggara, Ketengah Jaya, and Cheneh Baharu, showed better accomplishments. (Table 5.9) Despite the inability of these new towns to

Table 5.9. Samples of New Towns Population Achievement, 1980 and 1985.

New Town	Date of Designation	Distance from Nearby City (miles)	1980	1985* Annual Growth Rate	Projected (1990)	Population 1980	% Achievement 1985
Bangi	1974	Kajang (6)	2,100	36.6	100,000	2.1	10.0
Shah Alam	1964	Klang (5)	24,100	23.8	200,000	12.1	35.0
Bandar		Kota					
Penawar	1972	Tinggi (25)	1,033	9.4	34,000	3.0	4.8
Bandar		Kota					
Tenggara	1973	Tinggi (20)	5,683	7.1	26,800	21.2	30.0
Bandar							
Muadzam							
Shah	1970's	Pekan (32)	2,200	17.8	70,000	3.1	7.1
Bandar Pusat	1970	Temerloh(16)	4,129	2.6	50,000	3.1	3.2
Ketengah		Chukai-Paka					
Jaya	1976	(13)	5,755	8.7	22,000	26.2	39.7
Cheneh							
Baharu	1977	Kemaman(16)	2,432	8.6	15,000	16.2	24.5

Note: * is an estimate

Source: Johore Tenggara Development Authority. Revision of KEJORA Master Plan. 1986.

Ngah, Ibrahim. Socioeconomic Profile of KEJORA's New Towns. 1988.

Information Malaysia.(1988). 1988 and 1986.

Lee Boon Thong. "New Towns in Malaysia: Development and Planning Policies". In New Towns in East and Southeast Asia. 1987.

attain the stated population goals, between 1980 and 1985, Bangi and Shah Alam have demonstrated a tremendous growth rate. The same has been true with Bandar Muadzam Shah and several other new towns, such as Bandar Penawar, Ketengah Jaya, Cheneh Baharu, and Bandar Tenggara.

Ethnic composition in the new towns does not reflect a balance of racial groups. From 1970 to 1980, population distribution by ethnic groups in urban areas showed an increase for Malays which represented 37.4 percent of the urban population. While the Chinese increased their shares of urban population to 50.6 percent, other ethnic groups, Indians and other races, have declined. (Fifth Malaysia Plan, 1985, p.134) The government policy to restructure the society so that Malays and other Bumiputeras would be given greater opportunities to succeed in the urban economy, has place new town in a position to help accommodate this goal.

Both Bangi and Shah Alam new towns have a majority Malay population. In Bangi, 85.3 percent of the new town's residents were Malays and only 14.7 percent non-Malays. The reason why non-Malays do not reside in new towns is the lack of a provision of housing for this group. The government established a quota in the new towns built which 70 percent of housing is for the Bumiputeras and only 30 percent for non-Bumiputeras. This quota has resulted indirectly in segregation of the town.

In the rural new towns, it was expected that the ethnic composition would be in favor of the Malays. Among the reasons for the development of rural new towns was the encouragement of Malay's

participation in urban economy as well as improvement in quality of life. Therefore, many economic opportunities were given to Malays who moved to the rural new towns. Because only Malays migrated to rural new towns the ethnic composition constitutes more than 90 percent Malays. As shown in Table 5.10, the three new towns, Bandar Penawar, Bandar Mas, and Bandar Tenggara have the largest proportion of Malays. Only a very small proportion of Chinese, and Indians live in the new towns. Proportionately, Indians are larger in Bandar Tenggara because they work in the rubber plantations surrounding the town. A higher proportion of Chinese population is found in both Bandar Penawar and Bandar Mas.

Table 5.10. Ethnic Composition of KEJORA's New Town (In percentage)

Ethnic Group	Penawar	Mas	Tenggara
Malay	93.3	94.1	95.7
Chinese	2.9	5.0	0.3
Indian	1.9	0.9	4.0
Other	1.9	-	0.1

Source: Ngah, Ibrahim. Socioeconomic Profile of KEJORA's New Town. 1987.

Significant progress has been made towards the restructuring objective since implementation of the NEP. The performance in restructuring society during the period 1981-1985 indicates progress had been made although at a slower rate than experienced in the first decade of

NEP. (Fifth Malaysia Plan, 1985,p. 98) In terms of employment shares, more Bumiputeras have been found in a variety of sectors, especially in manufacturing and commercials. The distribution of occupational type showed that the share of Bumiputera in the higher earning professional and technical group was still low. (Table 5.11) By 1984, the share of Bumiputeras in eight professional groups was about 21 percent, Chinese 62 percent, and Indians 15 percent. With respect to other type of occupational groups, although the Bumiputera's proportion had increased over the years, a substantial number of them were still employed in lower paid jobs. The ownership and participation of Bumiputera in small scale commercial and service industries through proprietorships and partnerships showed some improvements. Table 5.12 displayed the Bumiputera ownerships in various small scale non-corporate commercial and service industries. In the wholesale and retail trade, Bumiputera's ownership increased by ten times over the ten year period. In transport, tourist and travel, hotels, as well as in professional services, the Bumiputera proportion also improved. Overall, restructuring the society is progressing in the right direction even though the projected objective could not be achieved by 1990.

Generally, the role of each new towns has shaped the employment pattern of the town. Table 5. 13 showed employment by sector in Shah Alam and Bangi new towns. Comparing the employment structure of Bangi and Shah Alam with the Federal Territory reveals that there are differences in employment shares for each sector. In the case of the manufacturing sector, Shah Alam is over-represented. The manufacturing

Table 5.11. Malaysia: Distribution of Professional and Technical Occupation by Ethnic Group, 1984. (In percentage)

Profession	Bumiputera	Chinese	Indian	Others	Total
Architects	103 (15.6%)	539 (81.9%)	7 (1.1%)	9 (1.4%)	658
Accountants	286 (8.9%)	2,678 (82.8%)	195 (6.0%)	75 (2.3%)	3,234
Engineers	3,500 (25.2%)	9,294 (67.0%)	752 (5.4%)	335 (2.4%)	13,881
Dentists	194 (20.3%)	444 (46.4%)	286 (29.9%)	33 (3.4%)	957
Doctors	753 (16.7%)	1,881 (41.8%)	1,745 (38.7%)	126 (2.8%)	4,505
Veterinary Surgeons	128 (26.3%)	123 (25.3%)	198 (40.8%)	37 (7.6%)	486
Surveyors	237 (35.8%)	369 (55.7%)	39 (5.9%)	17 (2.6%)	662
Lawyers	272 (16.0%)	826 (48.7%)	557 (32.8%)	43 (2.5%)	1,698
Total	5,473 (21.0%)	16,154 (61.9%)	3,779 (14.5%)	675 (2.6%)	26,081

Source: Government of Malaysia. Fifth Malaysia Plan, (1986-1990). 1986.

Table 5.12. Malaysia: Ownership in Commercial and Selected Services Industries by Ethnic Group, 1971 and 1980 (In percentage)

Sector	1971				1980			
	Bumiputera	Chinese	Indian	Foreign	Bumiputera	Chinese	Indian	Foreign
Wholesale	2.5	78.5	12.0	4.0	8.2	81.8	2.6	5.2
Retail	13.0	74.6	8.4	2.3	34.2	57.7	6.1	0.7
Road Transport	17.8	61.2	4.1	3.1	62.5	30.7	2.7	0.1
Shipping companies	-	11.1	-	44.4	7.5	76.3	-	0.9
Tourist and travel agencies	19.2	46.1	5.8	15.4	26.8	52.5	5.7	2.6
Hotels and other lodging places	1.6	94.8	0.1	0.9	5.0	83.5	0.3	0.5
Professional services	7.0	69.7	12.5	5.1	10.2	65.2	12.7	0.9
Laundries & laundry services	6.7	61.9	16.5	14.7	7.4	64.8	26.1	0.6
Photographic	4.5	93.1	-	2.4	3.2	96.5	0.1	0.1
Beauty saloons	13.4	63.2	15.8	7.6	10.0	73.3	15.8	0.2

Source: Government of Malaysia. Fifth Malaysia Plan, (1986-1990). 1986.

sector accounts for about 70 percent of employment, compared with 13.7 percent in Federal Territory. On the other hand, Bangi's manufacturing sector represents only 13 percent of total employment. Comparing it with the nearby town of Kajang which had 68.4 percent employment in this sector, Bangi is not doing well in attracting manufacturers. Further comparison with Kajang in the spatial distribution of manufacturing industries shows the slow progress of Bangi to attract various kinds of industries. (Table 5.14) At the present time, Bangi lacks basic activity to

Table 5.13. Employment Sectors in Suburban New Towns (In percentage)

Sector	Federal Territory (1980)	New Town	
		Shah Alam (1980)	Bangi (1983)
Agriculture, forestry, mining, quarrying	0.8%	7.0%	10.0%
Manufacturing	13.7%	70.0%	13.0%
Construction	8.5%	4.0%	9.0%
Government, utilities, services	27.5%	17.0%	60.0%
Wholesale, retail, banking real estate, private services, business, and others	49.4%	2.0%	8.0%

Source: Perunding Bersatu. Shah Alam Extension Plan. 1983.
Selangor State Government. Bangi/Kajang Structure Plan Study.
1984.

Table 5.14. Spatial Distribution of Manufacturing Firms, 1983:

Type of Industry	Bangi	Kajang
Food	3	12
Beverage	-	2
Tobacco products	-	1
Textiles	-	3
Wearing apparel & footwear	2	35
Leather & leather products	-	1
Sawmills & wood products	-	7
Furniture & fixtures	1	19
Printing & publishing	-	1
Petroleum & coal products	-	2
Paper & paper products	1	2
Plastic products	-	3
China, glass & clay products	-	5
Non-metallic mineral products	1	8
Basic metal	-	7
Fabricated metal products	3	27
Non-electrical machinery	1	16
Electrical machinery	4	9
Transport equipment	-	2
Rubber products	-	-
Other manufacturing	-	3
Total	16	165

Source: Selangor State Government. Bangi Draft Structure Plan, 1986-2005. 1986.

ensure a balanced share of economic growth and the desired distribution of manufacturing employment.

Commercial establishments are comparatively undeveloped in both Bangi and Shah Alam. The commercial employment represents less than 10 percent of all employment within the town. The Federal Territory had an influence on growth of employment from commercial. The presence of Kuala Lumpur and the easy access to the city means that Kuala Lumpur

exerts a gravitational force in attracting certain retailing and businesses away from the new towns. The town center which is supposed to attract commercial activity has not yet been built in Bangi and less than half of the town center has been completed in Shah Alam. Due to this delay, fewer commercial establishments have been attracted to either town.

The largest portion of employment in Bangi is governments, utilities, and services sector. Bangi generate's more employment from these employers because of the training institutes, two universities, and the research centers, which provide employment for the new town's residents. Governments, utilities, and the services sector seem over-represented, considering that other secondary and tertiary employees are not growing.

The current relationship between employment and population in Shah Alam and Bangi is far from what would be necessary to be an independent town. The relationship between the new town's residents and the employment base is unbalanced. Although there are growing employment opportunities, the populations residing in the new towns are below projected plan, which indicates that the people who worked in the new towns are living outside the town. In Shah Alam, the majority of those working in the new town do not live in the town. On the other hand, about 39 percent of those living in the area are working outside the town. Table 5.15, highlights this point; of the total of 28, 708 jobs in Shah Alam, only 34 percent have been taken by those who actually live there. The balance are commuters living outside, the majority of whom live in Klang, Petaling Jaya, and Kuala Lumpur. Of those who live in Shah Alam and are working outside,

the majority are working in Klang/Port Klang, and Kuala Lumpur. (Perunding Bersatu, 1983, p.3.7) The same thing is happening in Bangi where only 37 percent of those employed chose to live in the town. Others prefer to live outside the town, especially in Kajang, Kuala Lumpur, Semenyih, and Serdang. (Lee, 1987, p.160)

Table 5. 15. Number of Workers Living and Working Inside and Outside Shah Alam, 1982.

Working Place	Living In Shah Alam	Living Outside Shah Alam	Total
Working Inside	9,884	18,824	28,708
Working Outside	6,850	-	-
Total	17,734		

Source: Perunding Bersatu. Shah Alam Extension Plan, 1983.

The suburban new towns, namely Bangi and Shah Alam, have not reached the level of self-containment as planned by 1990. The suburban new towns are for the most part workplaces for lower income groups residing elsewhere, and at the same time a residence for the middle class who commute to work. One of the reasons this has occurred is lack of low cost housing to accommodate low income workers in the factories. The out-commuting is the result of a lack of provision of employment for the middle class in the new towns. New towns only constitute a small portion of the Klang Valley's population, therefore they have not significantly contribute

to reducing urban congestions. In terms of diversifying the economic base, the employment composition does not indicate a well-balanced variety of jobs. Because the new towns are inhabited mostly by Malays, there is no integration among ethnic groups. Data are not available on occupational distribution by ethnic groups in the new towns. However, for ownership of shops in 1980, data show that more than two-thirds of shops within the new towns were owned by Malays. (Ismail, 1981, p. 6-7) This indicates that there is some participation by the Malays in small-scale businesses consistent with the NEP objectives to channel commercial activities to Bumiputeras.

Although this is happening in the new towns of Bangi and Shah Alam, the development of commercial activity is not as rapid as planned. Commercial enterprises such as restaurants, small construction, basic services, and small shops related to day-to-day needs are the kind of businesses the Malays are participating in the most. However, the suburban new towns have been somewhat successful in terms of providing better living environments for many urban dwellers, especially the middle class.

The importance of the employment structure in rural new towns (KEJORA new towns) indicates the functional relationship of the characteristics of the people to the economy. Agriculture and related primary sectors constitute 47 and 57 percent of the employment in Bandar Tenggara and Bandar Mas respectively. In Bandar Tenggara, the shares of employment from manufacturing and government services constitute about 36 percent of total employment. (Table 5. 16) Even though the proportion of manufacturing employment in Bandar Tenggara is greater than the other

towns there is only one company which has been operating in this town up to 1982. According to a recent study, until 1983, out of 16 applications for industrial locations in Bandar Tenggara, 8 applicants refused to come to the area due to its locational disadvantages. (Johore Tenggara Development Authority, 1986, p.36) Many investors are more attracted to areas with greater locational advantages, especially in the industrial zone area along the strip of Johore Bharu and Pasir Gudang in the southern tip of Johore state.

In Bandar Mas and Bandar Penawar, manufacturing is less important. In 1986, there was no private industry located in either town. The few jobs which exists in this sector are from processing coconut palm oil. A similar situation exists in other rural new towns outside the KEJORA's area. Rural new towns are not the prime choice for location of manufacturing firms. The attractiveness of a free trade zone area as well as accessibility, labor force availability, infrastructure, and encouragement of State Development Corporations to locate in their development areas provide strong incentives for the development of manufacturing industry outside the RDA area.

Further analysis of the employment structure (Table 5.16) shows that Bandar Penawar's largest employment is in tourism and government services. Thirty three percent of the employment is generated by the tourism industry, while 22 percent is in government services. Tourism plays a vital role in the economy of this new town because of the DESARU beach resort located in the vicinity of this town. The movement of

the KEJORA regional office to Bandar Penawar has increased the percentage of government employees.

Table 5.16. Employment Structure of KEJORA's New Towns, 1987

Sector	Bandar Tenggara	Bandar Mas	Bandar Penawar
Agriculture, forestry, mining, and fishing	45.6 %	57.4%	21.0%
Manufacturing	18.5 %	3.5%	2.1%
Construction	1.8%	0.8%	4.0%
Commercial	4.9%	3.2%	6.7%
Tourism	-	0.5%	32.9%
Government Service	18.1%	23.5%	22.3%
Other Services	10.0%	10.3%	9.7%
Others	1.2%	0.5%	1.2%

Source: Ngah, Ibrahim. Socioeconomic Profile of KEJORA's New Town, 1988.

For the three new towns, commercial employment represent only 3 to 7 percent of the total employment. The reason for this is the isolation of the new towns from commercial centers. Lack of accessibility and competition with the nearby towns of Kluang and Kota Tinggi have discouraged commercial establishments.

Regarding occupational structure, the three major new towns of KEJORA exhibit a similar pattern. Table 5.17, describes the job distribution in the new towns. Most of the new town's residents work in unskilled jobs in the low income occupation, such as laborer and production workers, agriculture, and service-related jobs. These groups represent

more than two-thirds of the total jobs in the three new towns. Higher paying jobs are very few in the new towns. Administrative and managerial, sales, and clerical types of occupation represent only a small percentage of the new town's jobs. However, Bandar Penawar provides opportunities for residents to work in tourism activities as service workers in hotels and resort businesses.

Table 5.17. Occupational Distribution of KEJORA's New Towns, 1987

Occupational Type	Bandar Penawar	Bandar Mas	Bandar Tenggara
Administrative & managerial	4.9%	0.8%	2.2%
Clerical	10.3%	4.3%	6.4%
Sales	4.0%	3.2%	3.5%
Service	30.2%	10.0%	9.6%
Agriculture	11.6%	6.2%	9.6%
Production/laborer	31.9%	74.4%	65.1%
Others	7.1%	1.1%	3.1%

Source: Ngah, Ibrahim. Socioeconomic Profile of KEJORA's New Towns. 1987.

An evaluation of "well being" can be accomplished through a review of the income of new town's residents before and after moving to the new town. A recent study was conducted which looked at the income distribution of the three major new towns of KEJORA. Table 5. 18, displays the income pattern of Bandar Penawar, Mas, and Tenggara. Overall, the residents of these new towns show better earnings while living in the new town as compared with what they received before they moved to the town.

Even though in general, more than half of the residents are in the category of lower income (less than M\$400), when compared with income before moving, the percentage of people earning less than M\$400 was decreasing. This indicates that by moving to the new towns, there is a tendency for the residents to be able to increase their income. A further look at an individual town shows that about 40 percent of Bandar Penawar's residents received income between M\$401-M\$1000 (middle income) which is an 8 percent increase from before the move. The same is true in Bandar Tenggara, where the percentage of people who received income between M\$401-M\$1000 is generally greater than before moving. Table 5.18 also shows that earnings are likely to increase for income more than M\$1001 after residents migrate to the new towns. The average income of the new towns varies. Bandar Penawar's mean income in 1987 was M\$462, Bandar Mas's was M\$358, and Bandar Tenggara's was M\$396. All three new towns experienced increases in mean income. This generally indicates improvement in earnings for the residents of new towns. In 1984, the mean income of Peninsular Malaysia was M\$494. The urban mean income was M\$695, and the rural mean income was M\$372. (Fifth Malaysia Plan, 1985, p.99) Comparing the mean income of the new towns with the nation's mean income, the average income of the three new towns was below average. However, the average income of Bandar Penawar is close to the nation's mean income. On the other hand, the average income of Bandar Tenggara and Bandar Mas is close to the rural mean income. This suggests that the new towns have not contributed to increasing the incomes of the rural people who reside in the new towns as compared with the mean income of other urban dwellers.

Table 5.18. Income Distribution in New Towns, 1987 (In percentage)

Category \$*	Penawar		Mas		Tenggara	
	Now	Before Moving	Now	Before Moving	Now	Before Moving
Less than 100	1.95	1.90	2.72	2.32	1.64	2.40
101 - 200	11.73	7.51	22.62	24.32	19.73	28.21
201 - 300	18.05	17.51	35.69	33.98	25.56	24.82
301 - 400	23.01	20.25	19.07	20.46	21.06	19.75
401 - 500	19.25	15.19	5.99	5.79	11.45	8.46
501 - 600	7.37	5.06	4.36	5.79	5.93	5.64
601 - 700	4.51	5.06	1.91	3.09	3.17	2.68
701 - 800	4.66	2.11	1.09	0.77	3.99	2.68
801 - 900	1.95	1.05	1.91	1.54	1.23	0.86
901 - 1000	1.95	3.16	0.54	0.39	2.56	1.83
1001 - 1500	3.01	2.74	1.63	0.77	2.04	1.69
1501 - 2000	0.75	0.10	0.27	0.89	0.82	0.28
2000 and more	1.80	1.27	2.18	0.89	0.82	0.71
Average Income	462	407	358	320	396	348

Note: * US\$1 = M\$2.50

Source: Ngah, Ibrahim. Socioeconomic Profile of KEJORA's New Towns 1987.

The analysis has focused on variables which relate to the socioeconomic aspects of new towns. In terms of physical development, progress has been somewhat slow. As mentioned, the economies of the new towns have not been expanding as expected. Suburban new towns are likely to attract middle income people who commute to work. In rural new towns, the agriculture schemes have been successful in attracting migrants to their hinterlands. However, within the new towns, the growth of manufacturing and other secondary employment has not progressed as was projected. These new towns are likely to be a single purpose town. With the lack of proper incentives, the economy of the rural new towns will depend on agriculture production which is always uncertain due to fluctuations in prices. This will affect the growth of the new towns.

Generally, all the new towns have been provided with basic community facilities. There are schools -- at least one elementary and one high school. Basic health services, such as a village clinic or small health center, police station, post office or postal agency, religious facilities, community hall, market, parks and playgrounds and bus station were already in the new towns. (See Appendix B) Today, all the new towns are at different levels of implementation. Suburban new towns are more developed compared with rural new towns, yet there are certain area of the new towns where construction is just beginning such as the town center of Bangi. Although a few rural new towns are more advanced, in many cases the rural new towns are still at an early stage of development.

CHAPTER VI

SUMMARY AND CONCLUSION

The thesis started by identifying trends in the urbanization process in Malaysia. It also addressed the national and regional development objectives and strategies which are influencing the course of development in Malaysia. New town development became a part of the comprehensive urban development strategy adopted by the government to complement the New Economic Policy. Finally, new towns were evaluated with regard to their stated objectives and strategies.

The progress of new towns in Malaysia has been slow. Population growth did not advance as expected. However, this is not different from other countries during the early years of new town development. Malaysia during the decade of the 1980s, has been experiencing rapid growth of urban areas. New towns were only a small influence on the growth of urban centers. As a whole, new towns comprise approximately less than 5 percent of the total urban population. Despite increases in the number of urban areas, new towns were not the major reason for this increase. None of the new towns developed were able to reach the urban threshold level of 10,000 people. Urban population has been concentrated in specific areas. In spite of the dominant role of the central region, urban growth has been occurring in the less developed regions. Rapid urban growth has been evident around three major urban centers: Kota Bharu, Kuala Terengganu, and Kuantan in the less developed eastern

region. This growth pattern is consistent with the strategy to disperse urban development away from developed states. Although large and intermediate urban centers have grown over the years, only a few small urban centers with less than 25,000 people actually experienced significant increases in their population.

From the current situation of new towns, it can be concluded that first, new towns will not be able to achieve their population projection for 1990, the final year of the New Economic Policy. Second, by the end of the century, many of these new towns will probably be small towns if population and economic growth do not accelerate. Currently, service centers are more likely to be the roles for the RDA's new towns.

New towns have only had a marginal impact on reducing regional imbalances. The policy of building new towns has not contributed to achieving regional development planning goals. The population in new towns is still too small to foster a significant economic structure.

The impacts of new towns on restructuring the society and urbanizing rural populations have not been successful. Suburban new towns have not been able to attract migrants, even though the migration to metropolitan areas continues to be a major problem. Despite the movements of people to the regional development areas, they are not locating in new towns. Instead, they live in the agriculture areas. As a result of this, the population in the new towns was small in numbers when compared with the rural population.

Increased participation of Bumiputeras in the urban economy is in the right direction although the accomplishments have been slow. The ethnic composition indicates that Malays are the majority occupants of new towns. Malays represented the largest proportion of residents for both suburban and rural new towns.

Residents of new towns are generally employed in low income occupations, especially in the rural new towns. However, the residents of suburban new towns are middle income usually employed in manufacturing and government services. Persons employed in professional jobs are also increasing in suburban new towns, but the expected economic impact has not occurred because they are more likely to work outside the town. In the new towns investigated, the share of Malays in commercial activities was small. New towns have only made a marginal impact on assisting Malays to become involved in commercial and service industries.

The mean income of the residents living in rural new towns is below the national average. As a result, the increased income enjoyed by other urban occupants has not been occurring in the new towns. Increasing rural population incomes through new towns is not occurring because the people who reside in the new towns are generally engaged in low paying jobs.

However, in general the rural new towns have been provided with the necessary urban facilities and amenities. Their residents have better urban amenities compared with other small urban centers. In new

towns the provision of urban services and amenities have contributed to an upgrading of the quality of life for rural populations.

New towns in Malaysia are fairly recent. The slow population growth of new towns consequently affected related aspects of developments. Given enough time to develop, new towns may contribute to a successful urban development program because the present situation shows that new towns are moving in the right direction to help influence the restructuring of society.

Several issues and conclusions that have emerged from the study are:

1. Success in accomplish balanced development rests on bringing immigrants from other parts of Malaysia to settle in new towns built by Regional Development Authority. Questions arise as to whether offering urban amenities more attractive than elsewhere will be sufficient to create a migration stream of the desired scale.

2. The location of the new towns and their links to existing urban centers have not been properly planned. Due to the close distance of new towns to the existing towns, many new towns are unable to be self-sufficient and self-contained. As a result there is a continuous flow of savings and disposable income from the new towns.

3. The number of new towns to be developed is too ambitious. If fewer new towns were built, the overall programs would be more successful.

4. Localization of manufacturing industries has been predominantly located within the major urban conurbation, e.g., Klang-Kuala Lumpur, Johore Bharu-Pasir Gudang, Bayan Lepas-Seberang Prai, and Gobeng. In terms of industrial dispersal, conflicts arise with regard to competition in locating firms. The RDA's have been given the responsibility to promote industrial development in their own areas. At the same time, the policy of industrial decentralization also called for the State Development Corporations to develop industrial areas within their own jurisdictions. RDA's have been severely hampered in attracting firms to their areas because the State Development Corporations have greater advantages with respect to infrastructure requirements, location of the firms, and access to skilled labors and transportation networks. The issue is how the industrial areas in the new towns can be developed when the state governments are actively recruiting industrial development elsewhere?

5. The development of new towns has done little to accomplish national objectives. It is not clear which types of town Bumiputera migrant should be directed to in order to achieve the objectives. Encouraging Bumiputera to move into existing urban centers presents an obstacle for this group. The major issue is related to the direction of Bumiputera participation in the urban economies, i.e., whether it should be within the new towns which have not yet fully developed or in existing urban centers, though these impose difficulties for full participation.

In order to respond to the issues outlined above, several recommendations are made for improvement of new towns development:

1. Continuous revision of Master Plans for the new towns is recommended. The plan for the new towns tends to look at end-state conditions and does not sufficiently emphasize the need for continuous planning. The development of new towns requires an on-going planning process.

2. There is a need for a top level regional authority above the several Regional Development Authorities to determine the optimum settlement pattern for the entire country, so that a coherent spatial policy at the national level as well as at regional level can be developed.

3. The Regional Development Authorities (RDAs) should revise their strategies and targets, taking into account the importance of achieving NEP objectives. RDAs should consolidate their existing new towns development program and at the same time reduce the number of new towns to be built. A more holistic policy reflecting a balanced flow of migration that accelerate neither rural nor urban bound migrations should be adopted.

4. New policies and programs should be designed for manpower training, and new incentives formulated to attract youth to the new towns. This could be accomplished by establishing training institutes and at the same time provide opportunities to practice in the new towns.

5. Future efforts of RDA's in industrial development should be geared towards identifying comparative advantages, locations, and types of industries to be built. The State Development Corporation and RDA should coordinate industrial locations. Better incentives should be provided for the RDA areas. Although industrial development should be based on the state development perspectives, the state also must incorporate RDA's needs.

6. Coordination between all levels of governments is imperative. Urbanization processes require coordination between physical, social and economic planning.

7. The private sector should be encouraged to be involved in the planning and development of new towns.

8. To accelerate the development of existing new towns, all races have to be considered as potential new town residents. For this to happen, new strategies should be formulated so Bumiputeras are not adversely affected.

9. Stronger planning and management controls are necessary to strengthen the physical and social qualities of new towns.

This study has shown that new towns have had only marginal impact in the achievement of national objectives. However, the development pattern has generally been practice. A longer period of time will be needed for new towns to successfully influence the urbanization process in Malaysia.

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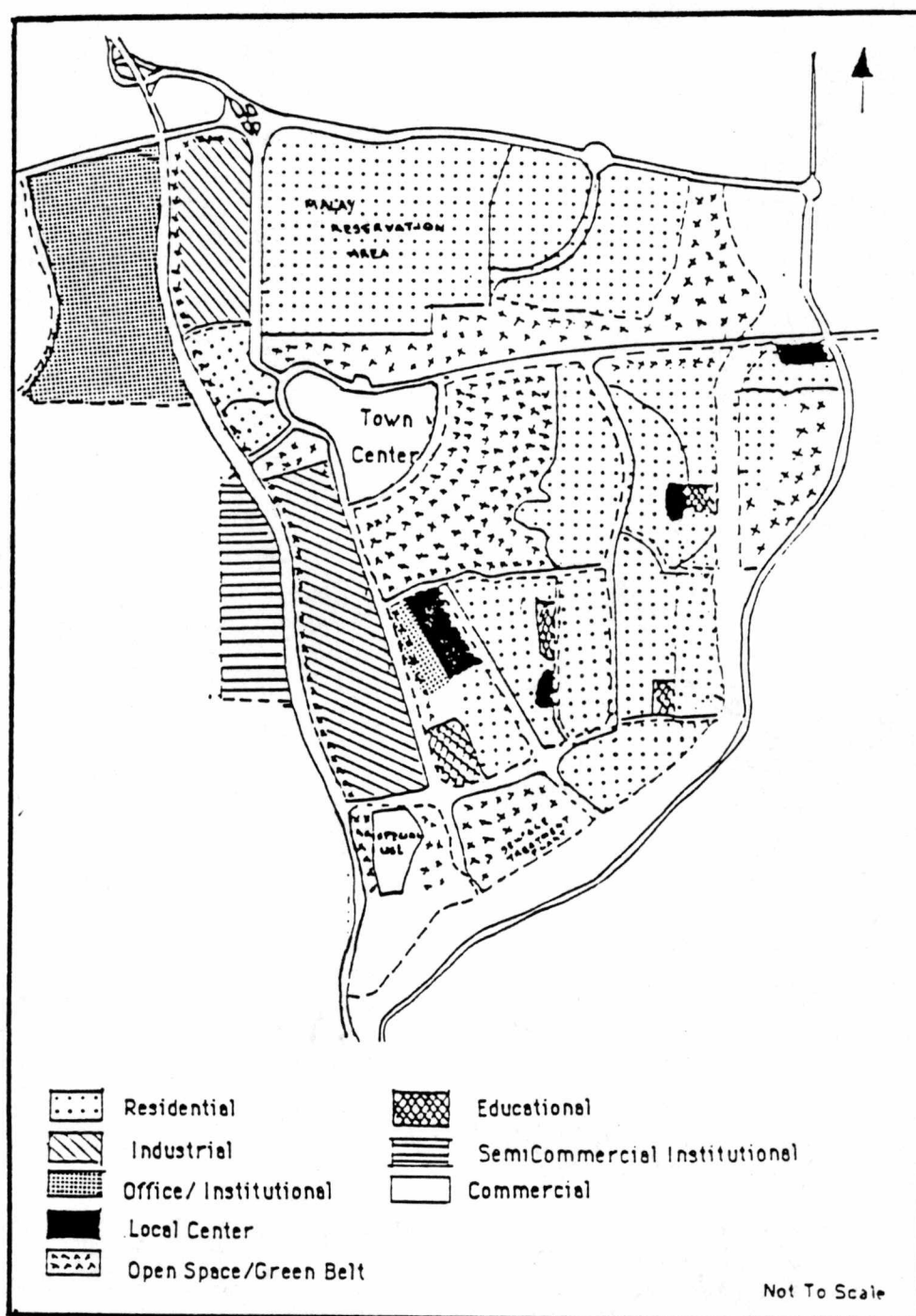
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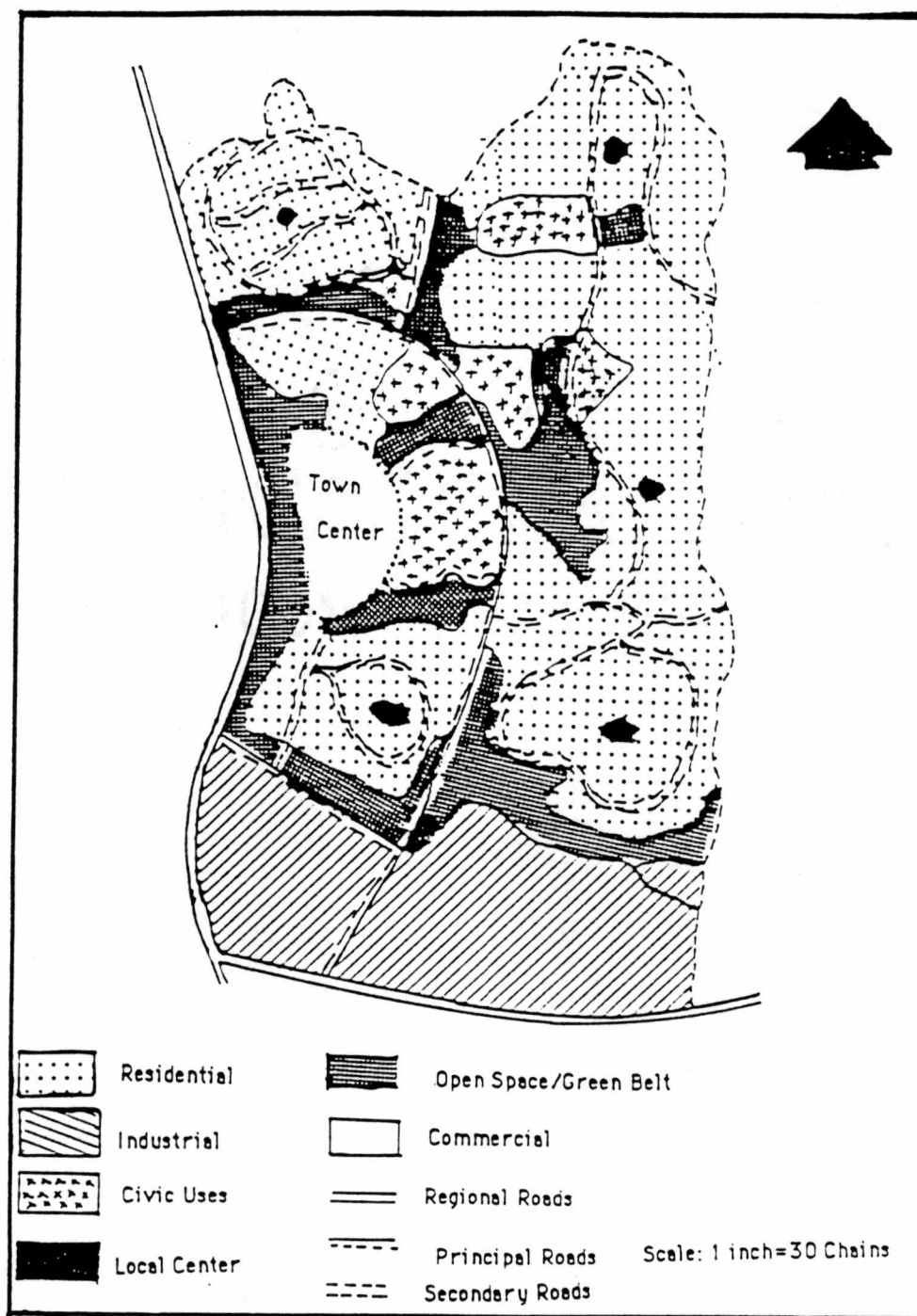
APPENDICES

APPENDIX A.



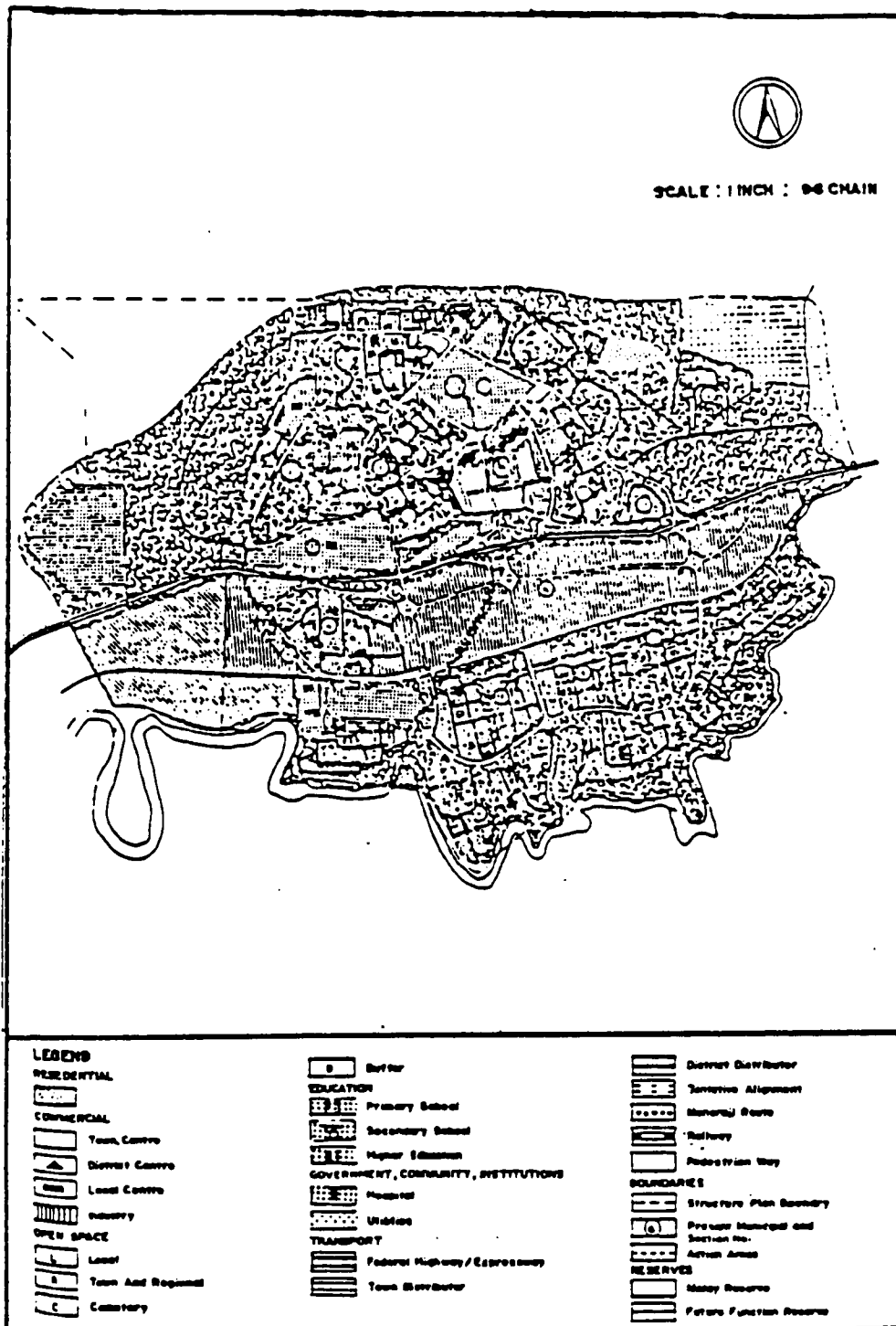
Source: Selangor State Development Corporation. 1976.

Figure A-1. Bangi Structure Plan



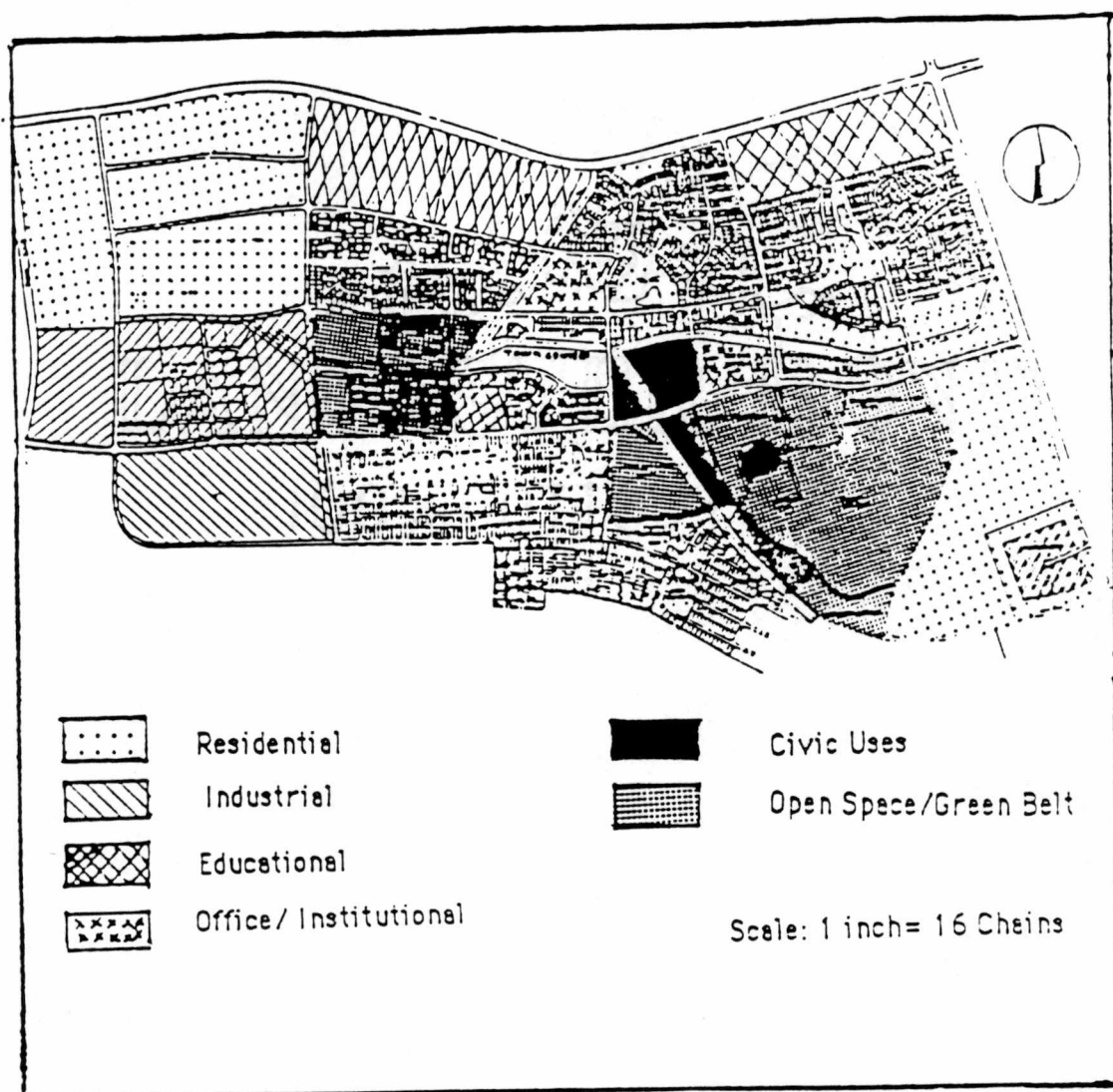
Source: Federal Town and Country Planning. The Jengka Regional Center. 1972.

Figure A-2. Bandar Pusat Structure Plan



Source: T. Mahesan. Development of New Towns and Redevelopment of Urban Areas. 1984.

Figure A-3. Shah Alam Structure Plan



Source: Johore Tenggara Development Authority. 1978.

Figure A-4. Bandar Penawar Structure Plan

APPENDIX B.

Table B-1. Community Facilities Provided in New Towns.

New Town	Schools	Health Services	Postal Services	Police Services	Religious Facilities	Civic Center	Community Hall	Library	Market	Parks	Bus Services	Fire Station
Bangi	✓	✓	✓	✓	✓	-	✓	-	-	✓	✓	-
Shah Alam	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bandar Tenggara	✓	✓	-	-	✓	-	✓	-	✓	✓	✓	-
Bandar Penawar	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓
Muadzam Shah	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
Ketangah Jaya	✓	✓	✓	✓	-	-	✓	-	✓	✓	✓	-
Al Muktafi Billah-Shah	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓	-
Cheneh Baharu	✓	✓	-	✓	✓	-	✓	-	✓	✓	✓	-
Ibam	✓	✓	✓	✓	✓	-	-	-	✓	✓	-	-
Tun Razak	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓

VITA

Hazlina Hamdan was born in the state of Selangor, Malaysia on March 12, 1964. She started her elementary and high school education in Kuala Lumpur, Malaysia. In 1982, she came to the United States on Malaysian Government scholarship to further study in the field of urban planning. She then graduated with a Bachelor of Science in Urban and Regional Planning Degree from East Carolina University, Greenville, North Carolina in 1986. In 1989, she received her Master of Science in Planning Degree from the University of Tennessee, Knoxville.