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PREFACE

As part of the work programme of the Economic and Social Commission for Asia and the Pacific (ESCAP), the secretariat's Population Division has undertaken the preparation and publication of a series of monographs on the population situation in countries and areas of the region. Each monograph has been prepared in close co-operation with country experts and with the financial support of the United Nations Fund for Population Activities (UNFPA). Reports have been published for Australia, Bangladesh, Hong Kong, India, Japan, Nepal, New Zealand, Philippines, Republic of Korea, Sri Lanka and Thailand. In addition, ESCAP and the South Pacific Commission have collaborated on the preparation of reports on American Samoa, the Cook Islands and Papua New Guinea, which together constitute the seventh in the series of monographs.

The purpose of the monographs is to provide the countries of the ESCAP region with an understanding of existing population problems as well as with a scientific basis for decision making, policy formulation and determination of development goals and targets. An immediate objective of the monograph is to encourage the analysis and maximum utilization in planning of the data collected through censuses, the vital registration system and sample surveys.

Most of the chapters in this monograph were originally drafted in 1977 and 1978. Before the monograph could be published, however, the 1980 census was conducted. Beginning in 1982 a shift in the population policy of Malaysia has been taking place, which emphasizes a slower rate of fertility decline than was the goal previously. These events required that the monograph be revised and updated to include 1980 census data and to reflect the current population policy. This revision was undertaken in 1985 by Mr. Fong Chan Onn, Faculty of Economics and Administration, University of Malaysia.

The National Family Planning Board (NFPB) is referred to frequently throughout the text. In April 1984 its name was changed to the National Population and Family Development Board (NPFDB). The practice in this monograph is to employ the name of the Board as it was at the time being referred to.

The present monograph was prepared in collaboration with a number of institutions, mostly in Malaysia. The experts co-operating on the study and their affiliation at the time of preparing their contributions were:

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The assistance of these experts and the co-operation of the Government of Malaysia is gratefully acknowledged.

The views expressed in signed articles are those of the authors and do not necessarily reflect those of the United Nations.

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INTRODUCTION*

A. LOCATION AND AREA

Malaysia is located in the southernmost portion of the South China Sea between 0 and 7 degrees north latitude and 100 and 119^{1/2} degrees east longitude. It consists of two main segments separated at the nearest point by about 530 kilometres of the South China Sea. Peninsular Malaysia consists of twelve states and the Federal Territory of Kuala Lumpur.¹ The eastern part of Malaysia is made up of the two states of Sabah (formerly British North Borneo) and Sarawak, which are on the northern portion of the island of Kalimantan and border Indonesia.

Peninsular Malaysia forms the southern tip of the Asian mainland and the southern part of the Kra Peninsula, with Thailand to the north and the island of Singapore to the south. It is bounded to the east by the South China Sea and to the west by the narrow Straits of Malacca which separate it from the Indonesian island of Sumatra. Peninsular Malaysia covers 773 kilometres from north to south, and about 322 kilometres from east to west at its widest point. Its total area is 131,675 square kilometres.

The eastern segment of Malaysia is a long narrow strip of land running across the northern quarter of Kalimantan Island. It extends for about 1,079 kilometres from the north to the southwest, and the maximum width is 258 kilometres. The two component states, Sarawak and Sabah, are contiguous, except that there are two small enclaves within Sarawak which belong to Brunei Darussalam. Sarawak covers an area of 124,446 square kilometres, while the size of Sabah is 73,711 square kilometres. The total land area of Malaysia is thus 329,744 square kilometres.

B. PHYSICAL FEATURES

Structurally, both segments of Malaysia form part of the old stable massif of Sunda-land.

However, the dominant folding in Peninsular Malaysia is of the Mesozoic age, while that along the northern edge of Kalimantan dates from the Tertiary period.

The mountain chain running down Peninsular Malavsia is the Main Range, which continues southward from Thailand for about 483 kilometres. The highest peak in this range is Gunong Korbu (Buffalo Mountain), which rises to a height of 2,164 metres in the State of Perak. The Range is about 50-65 kilometres wide, and over most of the peninsula it marks the division between the relatively narrow western coastal plain draining to the Straits of Malacca, and the much larger area of mountainous interior and coastal lowland which drains to the South China Sea. East of the main range, and separated by valleys, is a secondary mountain highland along the boundary between the states of Kelantan and Trengganu. Though generally lower than the Main Range, it nevertheless contains the mountain of the highest elevation (Gunong Tahan at 2,190 metres) in Peninsular Malavsia.

Of the coastal lowlands in Peninsular Malaysia, the strip of country lying between the Main Range and the west coast is by far the most significant. It varies in width from about 15 to 18 kilometres, but because of its much greater accessibility to major sea routes and also because of extensive areas of alluvial tin there, the western lowlands have been much more intensely developed than the remaining four fifths of the country. In contrast, the east coast lowlands are more irregular, less densely populated and less important from the point of view of productivity and commerce.

In many respects, Sabah and Sarawak are similar geographically to eastern Peninsular Malaysia, but their features are more extreme. The lowlands are wider and the rivers are longer and hence liable to more severe flooding. Although, the mountains of Sabah and Sarawak are generally of height comparable to those in Peninsular Malaysia, there is one striking exception in Mount

Contributed by Fong Chan Onn, University of Malaya.

¹ At one time Kuala Lumpur was a discrete concentration within the Federal Territory. By 1980 Kuala Lumpur had annexed all of the latter.

Kinabalu, a single isolated horn which towers above the Croker Range of Sabah to an altitude of 4,101 metres.

C. CLIMATE AND RAINFALL

Both segments of Malaysia, being at almost identical latitudes, are subjected to the same movements of air masses and have characteristic equatorial climates with uniformly high temperatures and rain at all seasons. Sarawak and Sabah are slightly hotter and more damp than the continental segment, but such differences are minor.

The temperature varies from 70 to 90 degrees Fahrenheit in the coastal areas, but this is tempered to a range of 50 to 80 degrees Fahrenheit in the mountain regions. In all areas, humidity remains extremely high during day and night throughout the year.

The year is divided into two seasonal monsoon periods, both of which are wet and hot. The north-east monsoon begins to blow in October and lasts until the end of February. The southwest monsoon, which is slightly milder, blows from mid-April to mid-October.

Total annual rainfall varies somewhat between the two segments during the two monsoon seasons. In Peninsular Malaysia, the mean annual rainfall is just over 2.5 metres, with precipitation occurring primarily during the south-west monsoon period. In the eastern segment, annual rainfall averages about 3.81 metres, most of which is received during the north-east monsoon period.

D. HISTORICAL SKETCH

Although the country which is now Malaysia was formed only in 1963, the history of the area it occupies is long and varied. In prehistoric times, it was populated by successive waves of migrants from the north. Evidence of human residence in various parts of Malaysia goes back more than 35,000 years. Evidence of a Mesozoic culture which began about 10,000 years ago suggests the existence of small dark-skinned Veddas that led a stone-age existence in the deep jungles of Malaysia.

The proto-Malays are believed to be Neolithic people who migrated from south-west China between 2500 and 1500 B.C. On their arrival, the earlier inhabitants retreated to remote highland areas, where they are now represented by small groups of aborigines who still live mainly as hunters and gatherers. Proto-Malays developed a simple agriculture in lowland and riverine areas, cultivating food crops such as yams and probably rice, and producing pottery and stone jewelry.

Because of its strategic position across the sea routes from India to the east, the Malay peninsula was always exposed to foreign traders. Their influence however, was only felt along the coast and did not penetrate to the interior. The eastern segment was subjected to the same influences. though to a lesser extent. In the first millennium of the Christian era, the Malay culture first came under the influence of Indian civilization. "From India came many of the Malays' basic political ideas, and practices, art forms and popular legends. Indian traders introduced successively Hinduism, Buddhism and Islam. Indian influence came in waves, and the Indian contributions to Malaysian culture represent several periods of history and geographic regions".²

At this time the economies of some of the kingdoms in south-east Asia were based primarily on trade rather than on agriculture. In the Straits of Malacca, the main power was the Sri Vijaya empire, which had its capital in southern Sumatra. Through its control of the Straits of Malacca and its sovereignty over the region's sea ports, Sri Vijaya became the richest and most powerful kingdom in south-east Asia. However, in the fifteenth century, the centre of power shifted from the east coast of Sumatra to Malacca,³ where a Malay Sultanate was established in about 1400 A.D. Malacca was the last, but one of the greatest indigenous kingdoms of south-east Asia, and its traditions shaped the Malay States of later centuries.

Malacca was a centre of power based on both regional and foreign trade. Traders from other parts of south-east Asia, such as the Celebes and Acheh, in northern Sumatra, and also

² Henderson and others, Area Handbook for Malaysia, (Washington, D.C., Government Printing Office, 1970).

³ Malacca began as an off-shoot of another centre of power. According to the *Malay Annuals*, a classic of Malay literature, a Malay prince from Tumasik (the present day Singapore) established himself at Malacca, an obscure an unimportant area at the beginning of the fifteenth century.

merchants from India, the Middle East and China, came to the port of Malacca. Their purpose was to sell the cargoes which they had brought and to purchase from others cargoes for the return voyage. The twice-yearly change in the prevailing monsoon winds made this inflow and outflow possible and predictable. Although Malacca had influence over many lesser ports on both sides of the Straits, it did not possess a territorial empire. The new port flourished; its earliest rulers were converted into Islam through contacts with traders from India and the Persian Gulf; they also sent trade missions to the Imperial Court of China to secure recognition.

The Sultans of Malacca were drawn from a patrilineal royal dynasty, and combined in their office attributes of indigenous south-east Asian, Hindu and Islamic royal prerogatives and symbolism. In the government of the State, the Sultan was assisted by high officers, to whom were given titles such as Bendahara (Chief Minister), Temenggong (Minister of War and Police) and Shahbandar (Minister of Ports and Trade). These officers were from families of aristocracy, and occasionally the Sultans married the offspring of these families. Inevitably there was intrigue and competition for power, but the ruling aristocracy as a whole was a caste set above and apart from their subjects. In its last decades, Malacca was weakened by conflict within the ruling class and by disputes with the foreign traders who filled the town. The dissatisfaction of the latter contributed to the fall of Malacca to the Portugese.

The first Europeans that attempted to establish dominance in the region were the Portuguese, who first came to Malacca as traders in 1509. The Netherlands, bidding for supremacy in the seas and control of Eastern trade, succeeded Portugal at the end of the sixteenth century. From the time the Dutch East India Company was established in 1619, attempts were made to subjugate Malacca. In 1640, the Netherlands succeeded because it managed to cut off food supplies to Malacca from Java and Sumatra before invading. The Netherlands however, treated Malacca not as a trading emporium but as a fortress that maintained the Netherlands monopoly of spices, pepper, gold and tin in the region.⁴

In the second half of the eighteenth century, the British began to compete for control of the Eastern trade. They began in a small way with the establishment of the British East India Company, which entered into alliance with the Malay Sultans, and later by acquiring strategic ports and harbours. During the period of the Napoleonic Wars, the control of Malacca and then Java were passed temporarily from the Netherlands to Britain. In the settlement that followed the war, maritime southeast Asia was in effect divided by the Anglo-Dutch Treaty of 1824 into two spheres of influence. Britain retained Penang Island (first acquired from Kedah in 1786), Malacca (acquired in 1795) and Singapore (acquired from Johore in 1819). These three positions along the west coast of Malaya formed the Straits Settlements, a chain of strategic shipping centres that strengthened British trading rights from Gibralter to Hong Kong. The Netherlands retained all territories south of Singapore, including Bengkulu, the interior port in West Sumatra.⁵ In 1832 Singapore became the administrative capital of all Straits Settlements.

Until 1874 it was the object of British policy to avoid interference in the affairs of the Malay states. British policy also required that no foreign power should interfere in a territory which stood so close to the Straits ports. However the frequent conflicts between rival Chinese groups and the interference of some European commercial interests regarding tin mining in west Malaya threatened the political and economic stability of the western Malay states in the 1860s and early 1870s. The official British policy of non-intervencame under increasing pressure from tion interested parties, and British policy changed abruptly at the end of 1873. Within a few months, the troubled and economically important states of west-central Malaya had come under a British protectorate. This was the first step in a sequence of events that brought the entire peninsula under direct British rule.

The British extended their authority over the Malay states through a series of treaties concluded with the Sultans by a combination of persuasion,

⁴ Although Malacca was always an important link in Netherlands communication and trade, the main centre of that country's power was further east in Java.

⁵ It has been observed by Henderson and others, op. cit., "another result of this treaty was that it created a lasting political division between the Indonesian archipelago and the Malay Peninsula. Sumatra which had participated actively in the affairs of the Malay Peninsula since Sri Vijaya times now began a separate history under Dutch colonialism".

pressure and an occasional show of force. The first of these was the Treaty of Pangkor signed in 1874 with the Sultan of Perak. Under the terms of this treaty, British rule was exercised through resident British officers, whose advice had to be sought and acted upon in all matters other than those concerning Malay religion and customs. In exchange for accepting British advice and protection, the Sultans and other royal chieftains received substantial stipends. This Residential System was subsequently extended from Perak to Selangor, Negri Sembilan and Pahang, and together these formed the Federated Malay States in 1896.

At the turn of the century, the British were consolidating their control over what is now Malaysia. In 1883 Sarawak, Sabah and Brunei accepted the protection of the Crown. There remained two zones of Malaya outside the sphere of British rule. The four states of Kedah, Perlis, Kelantan and Trengganu in the north were within the Siamese Though the (now Thai) sphere of influence. British were anxious to extend northward up to the narrow Kra Isthmus, Anglo-French rivalry in and around Siam prevented the achievement of this goal. By 1909 however, these differences were resolved and the four northern states were transferred by Siam to the British sphere. The states accepted British advisers but did not join the Federated Malay States; they became known as the Unfederated Malay States. Johore remained independent, not becoming a formal protectorate until 1914. With this, the unification of the Malay peninsula under British rule was complete.

With the consolidation of British rule, a period of infrastructural development took place. Roads and railways were constructed; hospitals, schools, postal services and banks appeared all over the colony. Cultivation of rubber was introduced, while the tin mining industry expanded with the adoption of more innovative technology. Revenues nearly tripled; exports nearly doubled and material prosperity increased greatly. British rule in the Straits Settlements and the Malay States encouraged the immigration of non-Malay peoples, particularly Chinese and Indians.

Under the British, the Malay political system was preserved with minor modifications. The basic framework of political power was maintained, though the Sultans and the chieftains a certain loss of power. The Malay ruling class was reconciled to the Residential System however by the scrupulous insistence of the British advisers in distinguishing between the constitutional basis of power and executive control. The Residential System meant government in the name of the Sultan of the State. The early British officers conferred with Malay rulers and treated them with due deference as royalty. The creation of the State Councils was the first move in the evolution of the Malay States towards constitutional monarchy and representative government. They provided contact between the Chinese and the British Malay regimes, and were a step towards the acceptance of people not ethnically Malays as Malayans.

The existence of various communities with conflicting interests and differing viewpoints prevented the emergence of a united nationalist movement in the period up to 1942. To the Malays, the colonial administration was a bulwark against the economic strength and sheer numbers of immigrant communities. The Chinese and the Indians were preoccupied with their own material interests and in political developments in their ancestral homelands. Moreover, the Malay aristocracy, which still commanded the loyalty of the mass of peasants, was distrustful of the minority of Malay religious and social reformers. The British administration managed satisfactory accommodation with both the aristocratic leaders of the Malay community and the influential Chinese merchant class. There was no educated middle class in revolt against these forces. The status quo, however, was upset by the Japanese defeat of the British, a change which led Malaya to eventual independence.

The Japanese occupation from 1942 to 1945 was both a traumatic and catalytic experience. The British had failed to defend the country from foreign attacks; their reputation as a protecting power was destroyed. Each of the major ethnic communities looked forward to some new regime in which there would no longer be a British presence. Yet relations between the communities deteriorated owing to Japanese discrimination. The Japanese encouraged Malay and Indian nationalism so long as they could harness it to Japanese interests. These consisted mainly in putting down the resistance from Chinese led by the Communist Malayan People's Anti-Japanese Army. When the Japanese surrendered in 1945 however, the British Government started implementing two new objectives for Malaya, first the completion of the

territorial unification of the whole Malay peninsula (excluding Singapore, which was regarded as a distinct and special area), and secondly to place all ethnic communities on an equal basis, abandoning the distinction between the indigenous Malay population and the immigrant communities.

A new plan was proclaimed in the form of a Malayan Union, a united State in which the Malay states and their sovereign Malay rulers would lose all title to constitutional identity. All persons who had made Malaya their home were to be citizens of the new State, regardless of their origin. The highhanded manner in which these reforms were introduced added to the deep resentment among Malays and their distaste for the whole idea of the Malay Union. Opposition galvanized several nascent Malay political associations into the formation of the United Malay National Organization (UMNO), which since 1946 has been the dominant Malay communal party and the main government party in office after 1956.

In the face of this opposition, the British Government withdrew its Malayan Union proposals and negotiated a Federation of Malaya with the Malay rulers and political leaders. The Federation, which was established in February 1948, was still a union of the whole peninsula (including the former Strait Settlements of Penang and Malacca but not Singapore) under a strong central Government. It also recognized however, the continued sovereignty of the Malay rulers in their respective states, and preserved what came to be called the "special position" of their Malay subjects as the indigenous people of the country with corresponding rights.

In 1952, the leaders of UMNO and the Malayan Chinese Association (MCA) entered into an "Alliance" to which the Malay Indian Congress (MIC) was later admitted. Thus a limited coalition of moderate leaders of the three major communities prepared the way for self-government. The constitutional development of the years 1948-1956 was an intricate sequence of adjustments in which concessions were exchanged between the communal groups. In 1957, the Government, which had held powers of internal self-government since 1955, assumed powers of a fully independent state. The first Prime Minister was Tunku Abdul Rahman, President of UMNO and architect of the inter-communal Alliance coalition. Malaysia was established on 16 September 1963, through the union of the independent Federation of Malaya, the internally self-governing State of Singapore, and the former British colonies of Sarawak and Sabah. Singapore left the Federation in August 1965. The states of Malaya were designated West Malaysia in 1966 and later styled Peninsular Malaysia, Today, Malaysia is a federation of 13 states. The capital, Kuala Lumpur, is a separate Federal Territory. The supreme head of Malaysia is a Monarch elected for a five-year term from the Hereditary Rulers of nine of the states. The Monarch acts on the advice of Parliament and the Cabinet.

E. PEOPLE

Malaysia is a multiracial, multi-religious and multilingual country. The ethnic diversity that characterizes Malaysian society reflects a history of original habitation and later colonization by successive waves of migration of different groups of people. The population of present-day Malaysia can be grouped into three broad ethnic categories: native tribal groups and sub-groups; Malays; and Chinese, Indians, Europeans and others.

The native tribal people descended from the earliest inhabitants and have persistently maintained their own unique physical and cultural identities. They are most numerous in Sabah and Sarawak but form a very insignificant proportion of the population in Peninsular Malaysia. There are three distinct groups of tribal people in Peninsular Malaysia: the Semangs (about 4,000 people) live on remote mountain slopes in the north; the Senois are found mostly in the central mountains and foothills (estimated at 70,000 people); and the Jakuns (estimated at 20,000 people) live in the southern coastal areas and lowlands in the states of Selangor, Malacca, Negri Sembilan and Johore. The main tribal groups of Sarawak are the Ibans. who constitute about 32 per cent of Sarawak's population; the Land Dayaks, who form about 8 per cent of the population; and the Melanaus who form about 6 per cent of the population. The main tribal groups of Sabah are the Kadazans, the largest group, constituting approximately 32 per cent of the State's population; the Bajaus, representing about 13 per cent of the population; and the Murats, constituting about 5 per cent of Sabah's population. These peoples are generally ineffective as a group because of their small numbers and the great diversity with regard to origin, language and culture.

Malays constitute the largest segment of the population. Total Malay population in 1980 was 7.0 million, or 58.6 per cent of the Malaysian population. Identity as a Malay is extremely elusive and often arbitrary, but a Malay may be constitutionally defined as any Muslim who practises Malay culture, speaks Malay, and is accepted as a Malay within the community.

In Peninsular Malaysia, the original Malay settlements were concentrated in the lowlands and coastal areas along the rivers. The rivers provided not only an easy means of communication but also a source of water for cultivation. Each population concentration was dominated by a Raja or Sultan. Since these population enclaves were separated by thick forests, local dialects and cultural variations developed, particularly in Kedah, Perak, Pahang, Trengganu and Kelantan. Assimilation into the wider Malay culture varied with the origin of the strand of migration. Those from Sumatra accommodated themselves easily to the Malay culture, and they predominated in Malacca State. Those from Java and the Celebes however, took longer to integrate, and isolated themselves from the larger community into distinct groups of their own in Selangor, Penang, Perak and Johore.

Chinese were the second-largest ethnic group, constituting about 32.1 per cent of the total estimated population of Malaysia in 1980. Like the Malays, the largest concentration of Chinese (87 per cent) was in Peninsular Malaysia. In precolonial times, Chinese migrants periodically arrived in Malaya. Their objective was to make their fortune and return to their homeland, but with demand for labour, particularly after 1880, for road construction, plantations and tin mining, Chinese started settling permanently in Malaya. In Peninsular Malaysia, Chinese were concentrated in the tin-mining areas of the Larut district, Klang Valley in Selangor and the Kinta Valley and Sungei Ujong in Negri Sembilan. In Sabah and Sarawak, large numbers of Chinese were engaged in sawmilling, fishing, cultivation of pepper and rubber, and also in trade and commerce.

Indians constituted about 8.6 per cent of the total population of Malaysia in 1980. They migrated to Malaya largely in the nineteenth century to work on the newly opened rubber plantations. Most of the Indians were from south India and comprised Tamils, Telegus, Chettis and Malayalis. The largest group was the Tamils from Madras, of Dravidian ethnic origin. By the nature of the work they performed, Indians were concentrated in the rural areas on large plantations of rubber, coconut and oil palm mainly on the west coast of Peninsular Malaysia. The two main areas of Indian concentration are from Kuala Lumpur to Malacca and from the Kinta Valley to Penang.

F. MINERAL RESOURCES

A great variety of minerals is found in Malaysia. The most important is tin, which together with rubber used to be one of the twin pillars of the Malaysian economy. The tin deposits of Malaysia are among the world richest and most extensive. Malaysia is the world's major producer of tin, contributing to about 30 per cent of total world output. In addition, for all metals, including tin, Malaysia contributes 60 per cent of world trade. Tin is mined exclusively in Peninsular Malaysia in the west coast states of Perak and Selangor.

Tin mining has been overshadowed in recent years by exploration for and exploitation of the newly discovered petroleum resources in Sarawak, Sabah and Trengganu. Over the period 1970-1982, output of crude petroleum increased by 40.5 per cent per year to 0.3 million barrels.

Other mineral resources in Peninsular Malaysia include sizeable quantities of iron ore from the haematite deposits in Perak, Trengganu and Johore; coal of a poor grade useful for local heating; a little gold from Pahang; minor quantities of tungsten from Kedah and Trenggenu; and a promising output of bauxite from Johore. Apart from oil, other minerals found in Sabah and Sarawak include antimony, bauxite, dolomite, iron ore, mercury, nickel, copper and zinc.

I. BASIC COMPOSITION OF POPULATION*

A. AGE-SEX COMPOSITION

1. National pattern

The distribution of the population of Malaysia by age and sex as reported in the 1980 census is given in table 1. It can be observed that 39.7 per cent of the total population were below 15 years of age, and 13.6 per cent were below 5 years. Children and youth (persons aged below 25 years), made up nearly two thirds, or 60.7 per cent of the total population. Those of working age, that is aged between 15 and 64 years, made up 56.7 per cent of the population; while the older population, those aged 65 years and over accounted for 3.8 per cent. It can be seen from figure 1 that the age pyramid for Malaysia, as a whole, is regular and broad-based, indicating a young population.

The over-all sex ratio¹ for Malaysia as at the 1980 census was 100.1. In numbers, there were 6,537,109 males to 6,533,263 females. The youngest age groups (0-14) had more males than females, with a sex ratio of 104.5. In the working age group there were 97.7 males to 100 females, while in the oldest age group, 65 years and over, there were only 90.9 males to 100 females.

The sex ratio of the population of Malaysia for each five-year age group is also shown in table 1. It can be seen that in the age groups 0-14, males exceed females in a ratio of around 104 to 100, and that differentials in mortality rates have reduced the ratio progressively in each of the higher age groups. At the age of 50, males and females are equal in number. Above 50 the ratio falls below 100. The over-all sex ratio for a low-mortality population that has experienced no migration is approximately 98. Table 1 shows that the sex ratio for the 0-14 year age-group is about as it should be, but for the 5-9 year age group the ratio is too high. Possibly some of the 0-4 year old males and some of the 10-14 year old males were erroneously reported as 5-9 years of age. Alternatively, there could have been an under-reporting of females of 5-9 years of age. The sex ratios for age 15 to 29 years age groups are much too low; the ratios for these ages should be above 100. The deficiencies here could have been caused by either under-enumeration of males or by net out-migration of males.

In 1980 the age dependency ratio² for Malaysia was 76.7. This means that there were 76.7 persons outside the working age group for every 100 persons within the working age group. The dependency ratio for the male population in Malaysia was 79.0, while that for females was lower (74.8).

2. Peninsular Malaysia

The distribution of the population by broad age groups and by sex for Peninsular Malaysia. 1970 and 1980 is shown in table 2. It can be seen that in 1980, of the total 10.9 million persons enumerated in Peninsular Malaysia, 39.0 per cent were aged 0-14, 57.2 per cent were aged 15-64, and 3.8 per cent were aged 65 years and above. Comparisons with 1970 census data show that the percentage of persons aged 0-14 has decreased from 44.6 per cent in 1970 to 39.0 per cent in 1980, although the percentage of person aged 65 and over has remained stable over a long period. increasing slightly from 3.2 per cent in 1957 to 3.8 per cent in 1980. Over the period 1970-1980, the dependency ratio in Peninsular Malaysia decreased: in 1970, the ratio was 91.4, whereas in 1980 it was only 78.9.

The over-all sex ratio for Peninsular Malaysia in 1980 was 99.9 males to every 100 females. In numbers, there were 5,469,334 males to 5,475,510 females. The younger age groups 0-14 years had more males than females. In the working age group there were 97.2 males to every 100 females, while in the group 65 years and over, there were

^{*} Contributed by Shaari bin Abdul Rahman, Department of Statistics.

¹ Number of males per 100 females.

 $^{^2}$ Persons aged 0-14 plus those aged 65 and over per 100 persons 15-64 years.



Figure 1. Population distribution by age group and sex, Malaysia, 1970 and 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

Age		Population		Per cent	Males
group	Male	Female	Total	of total	females
0 - 4	911 245	866 330	1 777 575	13.6	105.2
5-9	910 350	878 775	1 781 125	13.6	104.5
10 - 14	829 917	800 597	1 630 514	12.5	103.7
15 - 19	731 028	735 598	1 484 626	11.4	99.4
20 - 24	595 642	654 802	1 249 644	9.6	91.1
25 - 29	510 563	538 019	1 048 582	8.0	94.9
30 - 34	435 408	432 738	868 146	6.6	100.6
35 - 39	338 773	327 953	666 726	5.1	103.3
40 - 44	314 158	305 896	620 726	4.7	102.7
45 - 49	232 090	238 446	470 536	3.6	97.3
50 - 54	205 974	206 529	412 503	3.2	99.7
55 - 59	156 219	162 238	318 457	2.4	91.3
60 - 64	131 777	136 842	268 619	2.1	96.3
65 +	233 965	257 300	491 265	3.8	90.9
Total	6 537 109	6 533 263	13 088 372	100.2	100.1

Table 1. Distribution of the population by five-year age group and by sex, Malaysia, 1980

Sources: R. Chander, Age Distributions – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1973).

Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics,

1983).

Age	1970					1980				
	Male	Female	Total	Per cent of total	Males per 100 females	Male	Female	Total	Per cent of total	Males per 100 females
0 - 14	1 997 942	1 928 172	3 9 2 6 1 1 4	44.6	103.6	2 181 278	2 091 139	4 272 417	39.0	104.3
15 - 64	2 291 458	2 312 268	4 603 7 26	52.2	99.1	3 085 424	3 174 130	6 259 554	57.2	97.2
65 +	145 245	134 472	279717	3.2	108.1	202 632	210 241	412 873	3.8	96.4
Total	4 434 645	4 374 912	8 809 557	100.0	101.4	5 469 334	5 475 510	10 944 844	100.0	99.9

Table 2. Distribution of population by broad age group and by sex,
Peninsular Malaysia, 1970 and 1980

Sources: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

R. Chander, General Report - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1973).

96.4 males per 100 females. It will be observed from table 2 that in 1970 the over-all sex ratio was 101.4 males to every 100 females. Since that time, the sex ratio has decreased, and the gap in numbers between males and females has been reduced. In the 0-14 age group, the sex ratio has increased from 103.6 in 1970 to 104.3 in 1980. In the 15-64 age group, the sex ratio has fallen from 99.1 to 97.2. In the 65 years and above category, the sex ratio has fallen from 108.1 males per 100 females in 1970 to 96.4 males per 100 females in 1980.

3. Sabah

The distribution of the population by broad age group and by sex for Sabah between 1970 and 1980 is presented in table 3. It can be seen that in 1980, of the total 653,604 enumerated, 42.8 per cent, or 409,342 persons, were below age 15. More than half, or 55.2 per cent of Sabah's population were aged 15-64 years. Another 2.0 per cent were aged 65 years and over.

In comparing the age distribution in 1980 with that of the 1970 census, it will be noted that the proportion of persons below age 15 decreased from 47.2 per cent in 1970 to 42.8 per cent in 1980. Correspondingly, the working age population of Sabah increased from 50.8 per cent of the total population in 1970 to 55.2 per cent of the population in 1980. The older age group, those aged 65 years and over, remained the same. The over-all sex ratio for Sabah in 1980 was 108.2 males per 100 females. In numbers, there were 499,345 males and 456,367 females in Sabah. In the 0-14 age group, there were 105.6 males per 100 females, but in the working age group, the sex ratio was higher, with 112.4 males to every 100 females. The 1970 census of Sabah also registered a predominance of males in the State. The over-all sex ratio for Sabah in 1970 was 108.2 males per 100 females. The dependency ratio for Sabah in 1980 was 81.3, while in 1970 it was 96.9. This means that in 1980, less people were dependent on the population in the working age group than in 1970.

4. Sarawak

The distribution of the population by broad age group and by sex for Sarawak in 1970 and 1980 is presented in table 4. Of the 1,309,896 persons enumerated in Sarawak in 1980, 41.5 per cent were below the age of 15; 55.1 per cent were in the working age group 15-64, and 3.4 per cent were aged 65 years and over.

The proportion of persons under the age of 15 was smaller in 1980 than in 1970. In 1980, 41.5 per cent of the population were under 15 years, but in 1970, 46.1 per cent were under 15. The working age group increased in proportion from 51.1 per cent in 1970 to 55.1 per cent in 1980.

Age	1970					1980					
	Male	Female	Total	Per cent of total	Males per 100 females	Male	Female	Total	Per cent of total	Males per 100 females	
0 - 14	158 279	150 023	308 302	47.2	105.5	210 254	199 086	409 340	42.8	105.6	
15 - 64	174 531	157 368	331 899	50.8	110.9	278 911	248 213	527 124	55.2	112.4	
65 +	6 904	6 499	13 403	2.0	106.2	10 180	9 068	19 248	2.0	112.3	
Total	339 714	313 890	653 604	100.0	108.2	499 345	456 367	955 712	100.0	109.6	

Table 3. Distribution of population by broad age group and by sex,Sabah, 1970 and 1980

Sources: Khoo Teik Huat, Population and Housing Census of Malaysia 1980 – State Population Report, Sabah (Kuala Lumpur, Department of Statistics, 1983).

R. Chander, Age Distribution - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1973).

Table 4. Distribution of population by broad age group and by sex,Sarawak, 1970 and 1980

Age	1970					1980				
	Male	Female	Total	Per cent of total	Males per 100 females	Male	Female	Total	Per cent of total	Males per 100 females
0 - 14	230 820	219 265	450 085	46.1	105.3	279 436	264 547	543 983	41.5	105.6
15 - 64	246 069	252 343	498 412	51.1	97.5	359 332	362 180	721 512	55.1	99.2
65 +	14 842	12 930	27 772	2.8	114.8	23 341	21 033	44 374	3.4	110.9

Sources: R. Chander, Age Distribution – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1973).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report, Sarawak (Kuala Lumpur, Department of Statistics, 1983).

The over-all sex ratio for Sarawak in 1980 was 102.2 males per 100 females. This was higher than that for Peninsular Malaysia, which was 99.9 in 1980. In the same year, the 0-14 age group had a sex ratio of 105.6 males per 100 females. The working age group in Sarawak had more females than males, the sex ratio being 99.2. The population above the age of 65 had more males than females. The over-all sex ratio for Sarawak in 1970 was 101.5 males per 100 females. In the 0-14 age group, the ratio was only slightly lower than in 1980, at 105.3 males per 100 females. The working age group in Sarawak in 1970 had a sex ratio of 97.5, indicating slightly fewer males per females than in 1980. Sarawak had a dependency ratio of 81.5 in 1980. This was higher than the ratio in 1980 for Peninsular Malaysia and Sabah, which were 78.9 and 81.3 respectively. In 1970, the dependency ratio for the population of Sarawak as a whole was 95.9.

B. COMMUNITY COMPOSITION

1. National pattern

Malaysia has a number of diverse community groups. In the 1970 Census of the Population of Malaysia, the term "community" has been used in preference to the term "race". This follows the practice adopted in earlier Malayan censuses. The term "race" is commonly used to define groups of persons exhibiting common physical characteristics. "Community", however, is more appropriate in describing a group of persons bound together by common interest, that is to say language or dialect, religion and customs.³

The population distribution of the major community groups as at the 1980 census is shown in table 5. It may be seen that of the total 13,136,109 person enumerated in the census, 6,380,383 or 48.6 per cent were Malay. Chinese accounted for 31.7 per cent, or 4,167,053. The third-largest community group was Indian, accounting for 8.4 per cent, or 1,101,699. The Pribumi of Sabah includes the Malays, Kadazans, Muruts and Bajau, accounting for 6.0 per cent of the total population (792,043 persons) in 1980. The Melanaus, Ibans and Bidayuhs were the main tribal groups in Sarawak, accounting for 543,235 persons or 41 per cent of the total population.

³ R. Chander, An Interim Report on the Post Enumeration Survey (Department of Statistics, 1983).

Table 5. Population distribution by community
group, Malaysia, 1980

Community	Total number	Per cent of total	
Malay	6 380 393 ^a	48.6	
Chinese	4 167 053	31.7	
Indian	1 101 699	8.4	
Pribumi (Sabah)	792 043 ^b	6.0	
Melanau (Sarawak)	69 813	0.5	
Iban (Sarawak)	368 508	2.8	
Bidayuh	104 914	0.8	
Other indigenous (Sarawak)	67 152	0.5	
Other	84 544	0.7	
Total	13 136 109	100.0	

Source: Khoo Teik Huat, General Report – 1980 Population Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983), table 4, pp. 18-23.

^a Excluding Malay from Sabah.

^b Including Malay, Kadazan, Murut, Bajau.

Geographically, communities in Malaysia are not evenly distributed. Table 6 shows the distribution of the total population of Peninsular Malaysia, Sabah and Sarawak by community as at the 1980 census. It will be observed that while in Peninsular Malaysia, Malays, Chinese and Indians made up the bulk of the population, in Sabah, Kadazans, Muruts, Bajaus, other indigenous and Chinese were the major groups, whereas in Sarawak Ibans, Malays, Melanaus, Bidayuhs and Chinese were the major groups. It should be noted that in 1980 Peninsular Malaysia accounted for 83.3 per cent of the total population of the country.

Table 6. Distribution of population by community
within Peninsular Malaysia, Sabah and
Sarawak, 1980

State/community	Population	Percentage within each state				
Peninsular Malaysia	Peninsular Malaysia					
Malay	6 131 626	56.0				
Chinese	3 651 196	33.4				
Indian	1 093 112	10.0				
Other	68,910	0.6				
Total	10 944 844	100.0				
Sabah						
Pribumi	792 043	82.9				
Chinese	155 304	16.3				
Indian.	5 293	0.6				
Other	3 072	0.3				
Total	955 712	100.1				
Sarawak						
Malay	248 757	20.1				
Melanau	69 813	5.7				
Iban	368 508	29.8				
Bidayuh	184 914	8.5				
Other indigenous	67 152	5.4				
Chinese	360 553	29.2				
Indian	3 294	0.3				
Other	12 562	1.0				
Total	1 235 553	100.0				
Total Malaysia	13 136 109					

Source: Khoo Teik Huat, General Report – 1980 Population Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983). The diversity of the present-day population of Malaysia is explained by migration in the past. Prior to the Second World War, immigration was the most important factor in population increase in Malaysia. The main migrants then were Chinese, Indians and, to a lesser extent, Indonesians. Unlike the Chinese, who migrated into all parts of Malaysia, Indians were confined mostly to Peninsular Malaysia, while Indonesians migrated in substantial numbers mainly to Peninsular Malaysia and Sabah. Table 7 shows the distribution of the population of Malaysia by community and by urban and rural area as at the 1980 census. It will be observed that at that time about five out of seven persons in Malaysia lived in rural areas. Altogether 8,643,701 lived in areas designated as rural, with the remaining 4,492,408 living in areas defined as urban. The distribution of the various community groups between urban and rural parts of the country varies. In Peninsular Malaysia

	Urban	area ^a	Rural area	la
State/community	Persons (thousands)	Per cent of total	Persons (thousands)	Per cent of total
Peninsular Malaysia				
Malay	1 545.1	25.2	4 586.5	74.8
Chinese	2 049.1	56.1	1 602.1	43.9
Indian	448.4	41.0	644.7	59.0
Other	30.5	44.3	38.4	55.7
Total	4 073.1	37.2	6 871.7	62.8
Sabah				
Pribumi	119.4	15.1	672.6	84.9
Chinese	73.3	47.2	82.0	52.8
Indian	2.4	45.3	2.9	54.7
Other	1.6	53.3	1.4	46.7
Total	196.8	20.6	758.9	79.4
Sarawak				
Malay	44.2	17.8	204.5	82.2
Melanau	9.7	11.6	60.1	88.4
Iban	17.8	4.8	350.7	95.2
Bidayuh	5.1	4.9	99.8	95.1
Other indigenous	3.6	5.4	63.6	94.6
Chinese	138.6	38.4	222.0	61.6
Indian	1.4	42.4	1.9	57.6
Other	2.1	16.7	10.5	83.3
Total	222.5	18.0	1 013.1	82.0
Total Malaysia	4 492.4	34.2	8 643.7	65.8

Table 7. Distribution of community groups by urban or rural area, Malaysia, 1980

Source: Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

^a "Urban" was defined in the 1970 census as all gazetted towns with population of 10,000 persons or more at the time of the census. The remaining areas were defined as "rural".

among Malays, only 25.2 per cent lived in urban areas in 1980, while the remaining 74.8 per cent lived in rural areas. Among Chinese, 56.1 per cent lived in urban areas as against 43.9 per cent in rural areas. Among Indians, the distribution in urban and rural areas was 41.0 and 59.0 per cent respectively.

In Sabah and Sarawak, the principal indigenous groups, Kadazans, Muruts, Bajaus, Melanau, Ibans and Bidayuhs show an overwhelming concentration in rural areas. In the case of Ibans 95.2 per cent lived in rural areas, while among Muruts, Bajaus and Malays, 84.9 per cent lived in rural areas. The degree of urbanization among the Pribumi groups, Chinese and others in the two states was much higher. More than 40 per cent of the Chinese in Sabah and Sarawak lived in urban parts of those states; while among the Pribumi groups, less than 20 per cent in Sabah lived in urban areas.

2. Peninsular Malaysia

Table 8 shows the distribution of population among community groups at the censuses of 1980, 1970, 1957 and 1947 in Peninsular Malaysia. It will be observed that the growth of each of the community groups has varied. Among Malays there was an increase of 2.5 per cent per annum over the period 1947-1957, while for the period 1957-1970, the increase was 3.8 per cent per annum, and 2.8 per cent during the period 1970-1980. Among Chinese the corresponding increases were 2.2, 2.4, and 1.6 per cent per year. As for Indians, the increases were 3.3, 2.0 and 1.6 per cent per year for the respective periods. Thus growth has been considerably greater among Malays than in the other two major communities.

Table 8 also shows the proportion of the different community groups in the total population. The proportion of Malays has increased from 49.5 per cent in 1947 to 49.8 per cent in 1957 and to 56.0 per cent in 1980. The proportion of Chinese declined from 38.4 per cent in 1947 to 37.2 per cent in 1957 and to 33.4 per cent in 1980. In the proportion of Indians there have been fluctuations. From 10.8 per cent of the population in 1947, the proportion increased to 11.7 per cent in 1957, and decreased to 10.0 per cent in 1980.

Table 9 shows the percentage distribution of the community groups by urban or rural area at the censuses of 1980, 1970, 1957 and 1947 in Peninsular Malaysia. Urban boundary changes between the 1947 and 1957 censuses undoubtedly

Community	1947		1957		1970 ^a		1980	
	Persons (thousands)	Per cent of total						
Malay	2 427.8	49.5	3 125.5	49.8	4 663.3	53.1	6 131.6	56.0
Chinese	1 884.5	38.4	2 333.8	37.2	3 117.9	35.5	3 651.2	33.4
Indian ^b	530.6	10.8	735.0	11.7	933.3	10.6	1 093.1	10.0
Other	65.1	1.3	84.5	1.3	66.3	0.8	68.9	0.6
Total	4 908.1	100.0	6 278.8	100.0	8 780.7	100.00	10 944.8	100.0

Table 8. Distribution of population among community groups, Peninsular Malaysia,
censuses of 1947, 1957, 1970 and 1980

Sources: R. Chander, Community Group - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics,

^a Excluding 28,834 persons enumerated on self-enumeration forms.

1983).

^b In the 1957 classification, Ceylon Tamils, other Ceylonese and Pakistanis were classified under the major community "others", whereas in 1970, these three specific communities were grouped under the major community "Indians". Thus, strict comparisons of the data for the "Indian" community over time are not possible.
Community	1947		1957		1970		1980	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Malay	7.3	92.7	11.2	88.8	14.9	85.1	25.2	74.8
Chinese	31.1	68.9	44.7	55.3	47.6	52.4	56.1	43.9
Indian	25.8	74.2	30.6	69.4	34.6	65.4	41.0	59.0
Other	46.2	53.8	49.3	50.7	40.8	59.2	44.3	55.7
Total	15.9	84.1	26.5	73.5	28.8	71.2	37.2	62.7

Table 9. Percentage distribution of community groups by urban or rural area, Peninsular Malaysia,
censuses of 1947, 1957, 1970 and 1980

Sources: R. Chander, Community Group – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

Fable	10.	Distribution of	population	by community,	Sabah,	censuses	of 1	970	and	1980
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Community	197	70 ^b	1980		
	Persons (thousands)	Per cent of total	Persons (thousands)	Per cent of total	
Pribumi ^b	436.8	67.1	792.0	82.9	
Chinese	138.5	21.3	155.3	16.2	
Indian	_	_	5.3	0.6	
Others	76.0	11.6	3.1	0.3	
Total	651.3	100.0	955.7	100.0	

Sources: R. Chander, Community Group - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics,

1983).

^a Excludes 2,300 persons enumerated on self-enumeration forms.

^b Includes Malay, Kadazan, Murut, Bajau and other indigenous.

make comparisons difficult. However, it is still desirable to explain in broad terms the extent to which there have been changes in numbers living in urban and rural areas.

It can be seen from table 9 that the proportion of Malays in the urban sector steadily increased from 7.3 per cent in 1947 to 14.9 per cent in 1970 and to 25.2 per cent in 1980. Among Chinese, the urban proportion increased from 31.1 per cent in 1947 to 47.4 per cent in 1970 and to 56.1 per cent in 1980. Among Indians the urban population has shown a steady increase since 1947. In 1947, only 25.8 per cent of Indians lived in urban areas, but by 1980 this had already increased to 41.0 per cent. In 1947, 46.2 per cent of "others" were in urban areas. This declined to 40.8 per cent in 1970, but increased to 44.3 per cent 1980. The decrease over the period 1957-1980 was probably due to more than proportionate out-migration of "others" from urban than from rural areas.

3. Sabah

Table 10 shows the distribution of population by community at the censuses of 1970 and 1980 in Sabah. It will be observed that the proportion of Pribumi has increased from 67.1 per cent in 1970 to 82.9 per cent in 1980. The proportion of Chinese has decreased from 21.3 to 16.2 per cent during the same period.

Table 11 shows the percentage distribution of community group by urban or rural area at the censuses of 1970 and 1980 in Sabah. It will be observed that the proportion of the population residing in the urban parts of Sabah has increased during the period 1970-1980. The proportion of pribumi in urban areas has increased from 6.0 per cent in 1970 to 15.1 per cent in 1980. The proportion of Chinese in urban areas has increased from 46.0 per cent in 1970 to 47.2 per cent in 1980.

4. Sarawak

Table 12 shows the distribution of population by community at the censuses of 1970 and 1980 in Sarawak. It will be observed that the population of Sarawak has increased from 887,300 in 1970 to 1,235,600 in 1980. The broad community

censuses of 1970 and 1980								
Community	19	970	1980					
	Urban	Rural	Urban	Rural				
 Pribumi ^a	6.0	94.0	15.1	84.9				
Chinese	46.0	54.0	47.2	52.8				
Indian			45.0	55.0				
Others	22.5	77.5	53.4	46.6				
Total	16.4	83.6	20.6	79.4				

Table 11. Percentage distribution of community groups by urban or rural area, Sabah,
censuses of 1970 and 1980

Sources: R. Chander, Community Group - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

^a Includes Malay, Kadazan, Murut, Bajau and other indigenous.

	19	70	1980					
Community	Persons (thousands)	Per cent of total	Persons (thousands)	Per cent of total				
Malay	178.2	20.1	248.7	20.1				
Melanau	52.3	5.9	69.8	5.6				
Dayak, Iban and Bidayuh	357.2	40.3	368.5	29.8				
Other indigenous	50.5	5.7	172.1	13.9				
Chinese	239.6	27.0	360.6	29.2				
Indian	·	_	3.3	0.3				
Other	9.5	10.0	12.6	1.1				
Total	887.3	100.0	1 235.6	100.0				

Table 12. Distribution of population by community group,Sarawak, censuses of 1970 and 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

Community	1:	970	1980		
Community	Urban	Rural	Urban	Rural	
Dayak, Iban and					
Bidayuh	2.4	97.6	4.8	95.2	
Other indigenous ^a	4.7	95.3	8.0	92.0	
Malay	17.8	83.0	17.8	82.2	
Chinese	41.9	65.3	38.4	61.6	
Indian	_	_	42.4	57.6	
Other	33.3	66.3	16.7	83.3	
Total	16.7	83.3	18.0	82.0	

Table 13. Percentage distribution of community groups by urban or rural area,Sarawak, censuses of 1970 and 1980

Sources: R. Chander, Community Group – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

^a Including Melanaus.

groups have maintained the same relative proportions over the decade, with all community groups reflecting marginal increases or remaining constant, except for the Chinese the proportion of which increased from 27.0 per cent in 1970 to 29.2 per cent in 1980. Dayaks, Ibans and Bidayuh, the largest community group in Sarawak in 1970, represented 40.2 per cent, of the population, but by 1980, this share had fallen to 29.8 per cent. For "other indigenous" the proportion increased from 5.7 per cent in 1970 to 13.9 per cent in 1980. In the case of Malays, the proportion remained the same as in 1970.

Table 13 shows the percentage distribution of community groups by urban or rural area at the censuses of 1970 and 1980 in Sarawak. It will be observed that the degree of urbanization in Sarawak has increased during the 10-year period from 16.7 per cent in 1970 to 18.0 per cent in 1980.

"Other indigenous" in urban areas increased from 4.7 per cent in 1970 to 8.0 per cent in 1980, and Malays remained at 17.8 per cent in 1980. The proportions of Chinese in the urban sector decreased from 41.9 per cent in 1970 to 38.4 per cent in 1980. In the case of "others", the proportion in urban areas decreased from 33.3 per cent in 1970 to 16.7 per cent in 1980.

C. RELIGIOUS COMPOSITION

The distribution of the population of Malaysia by religious affiliation as at 1980 is given in table 14. The table shows that out of the total of 13,070,372 persons enumerated in the 1980 census, 52.9 per cent were Muslim, 17.3 per cent were Buddhist, 7.1 per cent were Hindu, 6.5 per cent were Christian and 11.6 per cent practised traditional Chinese religions such as Taoism and Confucianism. About 2.5 per cent of the population reported that they practiced "other religions" and 2.1 per cent of the total population enumerated reported that they practised no religion. Table 14 also shows the distribution of the population in urban and rural areas by religion. It can be seen from this table that about 60.4 per cent of the population in rural areas were Muslim and about 11.1 per cent were Buddhist. In urban areas only 29.2 per cent of the population were Buddhist and 38.6 per cent were Muslim. This distribution is explained by the community distribution of the population. Malays who are Muslim and Chinese who are Buddhist, are largely rural dwellers.

Table 15 shows the percentage distribution of religion by community for the populations of Peninsular Malaysia, Sabah and Sarawak as at the 1980 census. It will be observed that within each

D-lt-t	Ru	ral	Urt	an	Total ^a	
Keligion	Number	Per cent of total	Number	Per cent of total	Number	Per cent of tofal
Muslim	5 201 241	60.4	1 717 066	38.6	6 918 307	52.9
Buddhist	951 921	11.1	1 313 535	29.5	2 265 456	17.3
Confucianism, Taoism, other traditional Chinese religion	802 230	9.3	716 453	16.1	1 518 683	11.6
Hindu	581 535	6.7	338 858	7.6	920 393	7.1
Christian	587 346	6.8	255 644	5.7	842 990	6.5
No religion	198 768	2.3	76 540	1.7	275 338	2.1
Other	294 247	3.4	24 958	0.8	329 205	2.5
Total	8 617 288	100.0	4 453 084	100.0	13 070 372	100.0

Table	14.	Distribution	of urban,	rural and	total p	opulation	by r	eligion.	Malays	ia. 1980
			,							

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

^a Excluding 120,111 persons enumerated on self-enumeration forms.

religious group, there is a concentration of a particular community group. For example, in Peninsular Malaysia, almost all Muslims are Malays. Only 1.2 per cent of the total number of Muslims are Chinese, Indians or of other communities. In the case of Buddhists, the majority are Chinese, accounting for 98.9 per cent of the total number professing this religion.

D. MARITAL STATUS

A classification of the population aged 10 years and over by marital status for 1980 is given in table 16. It will be observed that 50.3 per cent of males and 42.0 per cent of females aged 10 years and over were unmarried in 1980. Nearly half of the females aged 10 years and over, 48.5 per cent, were reported as married; for males, the proportion was 47.4 per cent. It will also be noticed from the table that the incidence of widowhood was higher than that of widowerhood. While 1.7 per cent of all males aged 10 years and over were widowed, the corresponding rate for females was 7.7 per cent. Table 17 gives the proportion of the male and female populations never married, married, widowed, and divorced or permanently separated within different age groups in 1980. It will be noted that larger proportions of women than men were widowed and divorced at all ages.

The percentage distribution of the male and female populations aged 10 years and over by marital status for Peninsular Malaysia, Sabah and Sarawak is given in table 18. Sabah had the highest proportion of never-married male population and Sarawak had the highest proportion of nevermarried female population in 1980. The lowest proportion of never-married men and women were to be found in Peninsular Malaysia and Sabah, respectively. The highest proportion of married women were to be found in Sabah. The proportion widowed among females was highest in Peninsular Malaysia, and for the males was highest in Peninsular Malaysia and Sarawak.

			Confination					
Community	Muslim	Buddhist	Tao, other traditional Chinese religion	Christian	Hindu	No religion	Others	
Peninsular Malaysia								
Malay ^a	98.8	0.04	0.03	2.1	0.1	18.8	49.6	
Chinese	0.1	98.9	99.8	51.6	0.5	78.2	18.0	
Indian	1.0	0.3	0.1	35.2	99.4	1.0	30.3	
Other	0.1	1.5	0.02	11.1	0.1	2.0	2.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number	6 106 105	2 064 949	1 401 681	233 023	915 446	72 659	92 850	
Sabah								
Pribumi ^a	99.3	5.5	10.0	84.7	10.0	88.3	71.5	
Chinese	0.3	94.0	89.8	14.5	7.6	11.3	20.0	
Other ^C	0.4	0.5	0.2	0.8	82.4	0.4	8.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number	487 627	78 868	36 604	258 606	2 896	57 481	5 432	
Sarawak								
Dayaks	1.0	0.5	0.9	59.4	2.7	47.2	79.0	
Other indigenous ^b	20.1	0.2	0.4	15.3	0.5	4.8	5.6	
Malay	76.4	0.	0	0	0	0	0	
Chinese	0.3	98.9	98.7	23.9	8.3	47.5	13.0	
Other ^C	2.3	0.4	0.1	1.3	88.4	0.5	2.3	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number	324 575	121 639	80 398	351 361	2 051	145 198	24 872	

Table 15. Percentage distribution of religions by community group,
Peninsular Malaysia, Sabah and Sarawak, 1980

Sources: Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report, Sabah (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report, Sarawak (Kuala Lumpur, Department of Statistics, 1983).

^a Including sub-groups such as Indonesian, Orang Asli (indigenous) and other Malay.

^b Including Melanau.

^c Including Indian.

NF • 1 4 4	1	Male	Female		
Marital status	Number	Per cent of total	Number	Per cent of total	
Never married	2 370 456	50.3	2 016 326	42.0	
Married	2 236 456	47.4	2 828 107	48.5	
Widowed	81913	1.7	367 717	7.7	
Divorced or permanently separated	26 689	0.6	84 008	1.8	
Total ^a	4 715 514	100.0	4 796 158	100.0	

Table 16. Marital status of the population aged 10 years and over by sex, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

^a Excluding 120,111 persons enumerated on self-enumeration forms.

Table 17. Proportion of population 10 years of age and over, never-married, married,widowed and divorced or separated by age group, Malaysia, 1980

Age group	Never married		Married		Widowed		Divorced or permanently separated	
	Male	Female	Male	Female	Male	Female	Male	Female
10 - 14	99.9	99.8	0.06	0.2	0.004	0.02	0.001	0.01
15 - 19	98.7	89.7	1.2	9.9	0.02	0.1	0.03	0.2
20 - 24	80.4	51.3	19.2	47.4	0.5	0.4	0.2	0.8
25 - 29	39.9	20.9	59.4	76.9	0.3	0.9	0.4	1.2
30 - 34	14.5	9.8	84.4	86.6	0.5	1.9	0.5	1.6
35 - 39	7.2	5.3	91.4	89.3	0.8	3.4	0.6	1.9
40 - 44	4.8	3.7	93.1	87.3	1.3	6.5	0.8	2.5
45 - 49	4.0	2.9	93.1	82.6	1.9	11.5	1.0	2.9
50 - 54	3.4	2.2	92.1	73.5	3.3	20.4	1.2	3.9
55 - 59	3.0	1.7	90.6	64.3	5.0	29.0	1.4	5.0
60 - 64	3.0	1.9	86.7	50.1	8.3	41.8	2.0	6.2
65 +	3.8	2.1	76.1	29.7	17.2	60.8	2.9	2.9
Total	50.3	42.0	47.4	48.5	1.7	7.7	0.6	1.8

Source: Calculated from data published in, Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

State	Never married	Married	Widowed	Divorced or perma- nently separated
Peninsular Malaysia				
Male	50.7	47.1	1.7	0.5
Female	42.4	<i>°</i> 47.9	7.9	1.7
Sabah				
Male	52.5	45.4	1.5	0.5
Female	41.9	52.4	4.3	1.4
Sarawak				
Male	51.6	46.1	1.7	0.5
Female	49.2	44.6	5.0	1.2

Table 18. Percentage distribution of male and female population 10 years of age and over by marital status, Peninsular Malaysia, Sabah and Sarawak, 1980

Sources: Calculated from data published in:

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Sabah (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Sarawak (Kuala Lumpur, Department of Statistics, 1983).

II. CHANGES IN SIZE AND DISTRIBUTION OF POPULATION*

INTRODUCTION

The history of changes in the size, growth and distribution of population in Malaysia was not very remarkable prior to the beginning of the twentieth century. Although foreign merchants and traders had settled there since the fifteen century, their settlements were mostly confined to the ports of trade and scattered coastal areas and were never on a very large scale. The population in general, and particularly in the extensive inland areas, underwent little significant change.

Economic, and to some extent political, considerations brought about great changes in the population structure in the latter part of the nineteenth century, and especially in the twentieth century. The first half of this century saw fluctuating periods of strong growth, owing to immigration. The population influx, which has coincided with the economic development of the country, has significantly affected growth patterns and composition of the population.

A. SIZE AND GROWTH

Malaysia is made up of the states of Peninsular Malaysia, Sabah and Sarawak. Historically,

Contributed by Jean Pala, Department of Statistics.

these three areas have had somewhat varying demographic trends because of their different geographical positions, and also because of the fact that until the formation of Malaysia in 1963, they were three separate political entities. Thus the availability of data is not consistent for these three areas.

Table 19 shows the population of Peninsular Malaysia, Sabah and Sarawak in the various years for which population census data is available. In 1980 the total population was enumerated as 13,745,241. Using an estimate of 10,439,430 for 1970 the population of Malaysia has undergone an increase of about 30 per cent over the period 1970-1980.

1. Peninsular Malaysia

Growth rates of the population have varied during the different intercensal periods, depending mainly on the extent of migratory inflow. The average annual percentage growth rates for Peninsular Malaysia are shown in table 20.

Population growth in Peninsular Malaysia was large in some states and not so significant in others. With the beginning of large-scale tin mining and rubber plantation, opportunities for employment attracted migrants. Chinese were attracted

Year	Peninsular Malaysia	Sabah	Sarawak	Total Malaysia
1957	6·278 758	• • •	•••	• • •
1960	6 836 731 ^a	455 421	744 529	8 035 681 ^b
1970	8 809 557 ^c	653 604	976 269	10 439 430
1980	11 426 613	1 011 046	1 307 582	12 235 978

Table 1	9.	Population	for	Peninsular Mala	ysia	Sabah and	Sarawak.	, 1957-1980	census v	years
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Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report - 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics,

1983).

*

^a 1960 figure for Peninsular Malaysia is from the Revised Intercensal Population Estimates and is not a census count.

^b Estimate.

 $^{\circ}$ Not adjusted for under-enumeration, and excluding 9,580 way farers and persons afloat.

Intercensal period	Absolute change	Per cent change	Average annual per cent growth rate	
1911 - 1921	567 640	24.3	2.2	
1921 - 1931	881 067	30.3	2.7	
1931 - 1947	1 120 328	29.6	1.6	
1947 - 1957	1 370 672	27.9	2.5	
1957 - 1970	2 530 799	40.3	2.6	
1970 - 1980	2 617 056	29.7	2.6	

Table 20. Population change and growth rates,
Peninsular Malaysia, 1911-1980

Sources: R. Chander, General Report - 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

by the tin mining industry, as well as by opportunities in commerce, while immigrants from south India were attracted to the rubber plantations. Thus the states in which these two activities flourished attracted larger numbers of migrants and underwent more rapid population growth. The growth rates of each state as shown in table 21, give an idea of the states which were enjoying the economic boom and population boom. It can be observed that the states which were developed in terms of rubber plantations and tin mines experienced high growth rates in the two decades from 1911 to 1931. Johore, Kedah, Negri Sembilan, Perak and Selangor showed such a pattern. During the period 1970-1980, Pahang and Selangor showed the highest average annual percentage growth rate mainly on account of the rapid inflow of migrants to these states from other parts of Peninsular Malaysia.

Table 22 shows a pattern of gradual decline in the proportion of Malays during the period 1911-1957, which led to a greater proportion of the non-indigenous group. However, a reversal in the trend was evident in 1970 and 1980.

However, it should to be noted that the migrant population was rapidly becoming a permanent aspect of the growth and size of the population in Peninsular Malaysia, as greater numbers of the "non-indigenous" were being locally born. Table 23 shows the percentage of the population who were born in Peninsular Malaysia during the census years from 1921 to 1980.

The migrant population are in a sense, no longer migrants. Only 5.0 per cent of the population in 1980 were found to be born outside Peninsular Malaysia, compared with 43 per cent foreign-born in the population of 1921.

Natural increase of the population was relatively low in the early decades, due to high death rates (tropical diseases were not under control then) and an unbalanced sex-ratio, as immigrants were mainly males. However, there has been a significant decrease in the death rates, from 19.4 per 1,000 in 1947, 7.3 per 1,000 in 1970, to 5.5 per 1,000 in 1980.

Furthermore, the sex ratio of the population has come closer to 100 as more immigrants have brought their wives along with them, and a larger proportion of the population has been born locally. By the time these two factors had been rectified in 1970, the population growth rate had risen to 26.6 per 1,000, which was relatively high.

2. Sabah

The rate of growth of the population of Sabah has not been particularly spectacular up to the present. However the movement of migrants into the State has contributed significantly to its population growth since the beginning of the twentieth century. The average annual percentage change during the intercensal periods 1911-1980 is indicated in table 24.

The prospect of employment is almost always the impetus for migration, and so it was in Sabah, where the introduction of rubber cultivation stimulated an influx of Chinese migrants. Though there was an initial trickle of migrants late in the nineteenth century to fill jobs in the tobacco and timber industries, it was the more profitable rubber cultivation that led to larger-scale immigration.¹ During the period 1970-1980, Sabah experienced a population growth rate of 4.5 per cent per annum.

Table 25 indicates the extent to which the size of the population of Sabah has been increased

¹ Lee Yong Leng, North Borneo (Sabah): A Study in Settlement Geography (Singapore, Eastern Universities Press, 1965).

]					
State	1911	1921	1931	1947	1957	1970	1982
Johore	180.4	282.2	505.3	738.2	926.8	1 277.2	1 728.93
Kedah	246.0	338.6	429.7	554.4	702.0	954.9	1 175.3
Kelantan	286.7	309.3	362.5	448.6	505.5	684.7	953.7
Malacca	124.1	153.5	186.7	239.4	291.2	404.1	488.2
Negri Sembilan	130.2	178.8	233.8	267.7	364.5	481.6	602.8
Pahang	118.7	146.1	180.1	250.2	313.1	504.9	847.2
Penang	278.0	304.3	359.9	446.3	572.1	776.1	992.8
Perak	494.1	599.0	766.0	953.9	1 221.4	1 569.1	1 893.7
Perlis	32.7	40.1	49.3	70.5	90.9	121.1	155.6
Selangor	294.0	401.0	533.2	710.8	1 012.9	1 630.4	(1 595.7+102)
Trengganu	154.1	153.8	179.8	226.0	278.3	405.4	577.6
Total	2 339.0	2 906.7	3 787.8	4 908.1	6 278.7	8 809.6	12 039.

Table 21. Population and average annual percentage change,
Peninsular Malaysia, by state, 1911-1982

Average annual percentage change

	1911-1921	1921-1931	1931-1947	1947-1957	1957-1970	1970-1982
Johore	4.4	5.7	2.3	2.3	2.4	2.6
Kedah	3.2	2.4	1.6	2.4	2.3	1.7
Kelantan	0.7	1.6	1.3	1.2	2.3	2.8
Malacca	2.1	1.9	1.5	2.0	2.5	1.6
Negri Sembilan	3.2	2.7	0.8	3.1	2.1	1.9
Pahang	2.0	1.1	2.0	2.2	3.6	4.4
Penang	0.6	1.5	1.7	2.5	2.3	2.1
Perak	2.0	2.5	1.2	2.4	1.9	1.6
Perlis	1.8	2.0	2.2	2.6	2.8	2.1
Selangor	3.1	2.8	1.8	3.5	3.6	4.0
Trengganu	0.0	1.6	1.4	2.1	2.9	3.0
Total	2.2	2.6	1.6	2.4	2.6	2.6

Sources: R. Chander, General Report - 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report - 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

Table	22.	Ethnic composition of population,
		Peninsular Malaysia, 1911-1980
		(Per cent)

Year	Indigenous	Non-indigenous	
1911	58.6	41.4	
1921	54.0	46.0	
1931	49.2	50.8	
1947	49.5	50.5	
1957	49.8	50.2	
1970	53.0	47.0	
1980	55.7	44.3	

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

Note: The indigenous population refers to the Malay population (including immigrants from Indonesia) and the aboriginal population. The non-indigenous population refers to non-Malays irrespective of place of birth.

Table 23. Birthplace of population, Peninsular
Malaysia, 1921-1980
(Per cent)

Year	Born in Peninsular Malaysia	Born outside Peninsular Malaysia	
1921	57.0 ^a	43.0	
1931	59.0 ^a	40.6	
1947	76.4 ^a	23.6	
1957	84.9	15.1	
1970	92.9	7.1	
1980	95.0	5.0	

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

^a Though these figures include those born in Singapore, that number is negligible.

Table 24. Population growth in Sabah,1911-1980

Intercensal period	Absolute change	Percentage change	Average annual per cent change
1911 - 1921	48 523	22.6	2.1
1921 - 1931	14 224	5.4	0.5
1931 - 1951	56 665	20.4	0.9
1951 - 1960	128 280	36.0	3.5
1960 - 1970	199 183	30.5	3.7
1970 - 1980	357 442	54.7	4.5

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

Table 25. Ethnic composition of populationin Sabah, 1911-1980

(Per cent)

Year	Indigenous	Non-indigenous		
 1911	80.4	19.6		
1921	77.1	22.9		
1931	74.0	26.0		
1951	72.7	27.3		
1960	67.4	32.6		
1970	64.3	35.7		
1980	82.9	17.1		

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983). by immigration. About 17.1 per cent of Sabah's population were non-indigenous in 1980. The largest of the immigrant groups. Chinese, formed 16.3 per cent of Sabah's total population in 1980. It is most probable that higher survival rates among the non-indigenous accounted for the continuous increase in the proportion of that population, in spite of strict immigration controls imposed in Sabah since the Second World War. Though there are insufficient data on births and deaths, it is safe to assume that natural increase among the indigenous population was rather low in the early decades of the century, as the population was significantly reduced by mortality from tropical diseases

In fact the growth rates in table 24 show that even with immigration, the population growth rates between 1921 and 1951 were relatively low, indicating low rates of natural increase. Since 1951 however, Sabah has seen very high population growth.

3. Sarawak

Since the mid-nineteenth century, Sarawak had been under the rule of the Raja Brooke clan. the contribution of whose administration was to help suppress piracy, curtail head-hunting practices and relieve Land Davaks from oppression.² The achievement of these aims and the stable political situation in Sarawak encouraged an inflow of Chinese migrants. The migrants were mainly attracted to the gold mines around Bau district. However, the Brooke administration continued to encourage Chinese migration with the introduction of pepper and gambier cultivation. At the turn of the twentieth century, rubber was introduced into Sarawak and along with it, a much greater inflow of Chinese migrants, which continued until the Second World War.

Table 26 shows the over-all growth rates during the intercensal years 1939-1980. Figures prior to this period are not available, and only crude estimates can be made to gauge changes over the first three decades of this century.

At the turn of the century, the population was estimated to be around 400,000 persons, and

Table	26.	Population change and growth rates,
		Sarawak, 1939-1980

Intercensal period	Absolute change	Per cent change	Average annual per cent change	
1939 - 1947	55 800	11.4	1.4	
1947 - 1960	198 144	36.3	2.4	
1960 - 1970	231 740	31.1	2.7	
1970 - 1980	331 313	33.9	3.0	

Sources: R. Chander, General Report - 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

the census count of 1939 gave a total count of just over 490,000. Thus population growth was extremely slow during the first half of this century in Sarawak. Even over the interval 1939-1947, the population increased by only 11.4 per cent. By contrast, over the period 1970-1980, the population has increased by 33.9 per cent.

Thus, it can be seen that even with immigration to Sarawak, the population did not undergo major changes in size or growth. The prevalence of disease and epidemics could have been a major reason for this in the early years, and the outbreak of the Second World War could have been another contributing factor for the 1939-1947 intercensal period.

The unprecedented high annual growth rate of 2.4 per cent per annum from 1947 to 1960 marked a change in population trends in Sarawak. The rate of 3.0 per cent per annum for 1970-1980 was even higher, and indicated a trends towards very high population growth rates in Sarawak.

Table 27 shows the proportion of the population the birthplace of which was outside Sarawak. The decline from 10.9 per cent in 1947 to 5.5 per cent in 1970, is an indication of the fact that migration has ceased to be a contributing factor in population growth. More people were born locally as the earlier migrant population became permanently established.

Natural increase has therefore been, the primary contributing factor to the high the growth

² Lee Yong Leng, *Population and Settlement in Sarawak* (Singapore, Donald Moore, 1970).

Year	Born in Sarawak	Born outside Sarawak
1947	89.1	10.9
1960	92.4	7.6
1970	94.5	5.5
1980 ^a	97.0	3.0

Table 27. Birthplace of population, Sarawak,1947-1980

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

^a Sarawak population born in and outside Malaysia.

Table	28.	Percentage distribution and increase in
		indigenous and non-indigenous popula-
		tion, Sarawak, Malaysia, 1939-1980
		-

(Per cent)

x,	Distribu	tion			
Year	Indigenous	Non-indigenous			
1939	73.7	26.3			
1947	72.4	27.6			
1960	68.1	31.9			
1970	68.9	31.1			
1980	69.5	30.5			
Intercensal	Increa	se			
period	Indigenous	Non-indigenous			
1939 - 1947	9.3	17.1			
1947 - 1960	28.3	57.2			
1960 - 1970	32.6	28.0			
1970 - 1980	82.7	66.8			

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report -1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

rates of more recent years. However, the rates of natural increase varied greatly between the indigenous and non-indigenous sectors of the population. Table 28 brings out some interesting contrasts in the growth of these two sectors.

Though migration had ceased to be a contributing factor to population growth, the proportion of non-indigenous (made up principally of Chinese) grew from 26 per cent in 1939 to 32 per cent of the total population in 1960. Only a slight decline in this proportion was evident in 1970, when the percentage dropped to 31. For the period 1947-1960, the indigenous population grew at a far slower rate than the non-indigenous population.

This trend, however, was reversed during the period 1970-1980, over which time the indigenous population increased by 82.7 per cent while the non-indigenous increased only by 66.8 per cent. Thus, it can be seen that the early migration trends have contributed to the total size of the population of Sarawak even up to 1980, when 30.5 per cent of the total population, comprised non-indigenous people.

B. DISTRIBUTION

Just as economic development and growth in this century have largely been responsible for changes in the trends in population size and growth in Malaysia, economic factors have also been responsible for trends in population distribution in the country. Geographical factors which include climate, physical features (mountains, rivers), vegetation and soil conditions have historically been the natural determinants of population distribution. Thus it is significant to note the extent to which economic development has played a part in the changes that have come about since the beginning of the twentieth century.

Changes in population distribution have been more significant in Peninsular Malaysia than in Sabah or Sarawak. Two factors have probably accounted for this. First because neither Sabah nor Sarawak have undergone as much economic growth as Peninsular Malaysia has, incentives for population inflow have not been as strong. Secondly, the populations of both these states are very small in size, relative to their land areas. Table 29 gives the population density of these three areas from 1960 to 1980.

The population density in Peninsular Malaysia is by far the highest with 86.8 persons per square kilometre in 1980, as compared to 13.7 persons per square kilometre in Sabah and 10.5 persons per square kilometre in Sarawak. Thus, changes in distribution patterns over time will be more obvious and perhaps more significant in Peninsular Malaysia than in Sabah or Sarawak.

Table 29. Population and population density of Peninsular Malaysia,
Sabah and Sarawak, 1960, 1970

	196	i0	19	70	1980		
	Population	Density	Population	Density	Population	Density	
Peninsular Malaysia	6 836 731 ^a	52.0	8 809 557	66.9	11 426 613	86.8	
Sabah	454 421	6.2	653 604	89.0	1 011 046	13.7	
Sarawak	744 529	6.0	976 269	7.8	1 307 582	10.5	
Total Malaysia	8 035 681 ^a	24.4	10 439 430	31.7	13 745 241	41.0	

(Persons per square kilometre)

Sources: R. Chander, General Report - 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics,

1983).

^a Estimates.

Adding to the fact that Peninsular Malaysia, Sabah and Sarawak were separate political entities with different influences affecting them till the formation of Malaysia in 1963, it would seem best to study distribution patterns and trends separately for each of these three areas.

1. Peninsular Malaysia

(a) Distribution by states

The eleven states in Peninsular Malaysia vary considerably in area, resources and size of population. The pattern of population distribution has persisted since the early part of this century, when immigrants to the country settled in areas of greater economic opportunity. Table 30 shows the percentage distribution of population in each state for the census years from 1911 to 1982.

Changing distribution over the years has indicated both development in the states, an important factor in population distribution patterns, and interstate movements. The distribution for 1982 shows that the five states of Selangor, Perak, Johore, Kedah and Penang together accounted for 70 per cent of the total population. The two most populated states were Selangor and Perak, and together they formed about 37.5 per cent of the total population.

The east coast states of Kelantan, Trengganu and Pahang, have generally suffered from the disadvantages of isolation and inaccessability to the west coast states. The net result has been that a greater concentration of people settled along the western coast, with this pattern becoming accentuated over the years. The western states accounted for 76.1 per cent of the total population in 1911, 79.1 per cent in 1921, 80.8 per cent in 1931, 81.1 per cent in 1947 and 82.5 per cent in 1957. However, by 1982 their proportion had declined slightly to 80.3 per cent reflecting governmental efforts to develop the east coast states with land schemes and cottage industries, and thus prevent excessive out-migration from these states.

Selangor is a State where the population has grown steadily over this century. Though in the early decades this was a result of heavy immigration on account of high tin production, the imputes for this growth in recent years has been the increasing presence of manufacturing industries and commercial activities. The growing numbers are made up mainly of migrants from other states within Peninsular Malaysia, all looking for jobs in Selangor. In the case of Perak, tin mining remained the biggest attraction for population in the first half of this century, though recent trends indicate that this State is experiencing net outflows of population, especially to Selangor. This could be due to the stagnation of the tin mining industry.

The proportions of population of the two east coast states of Kelantan and Trengganu have declined in recent years. Kelantan showed a decline from 12.2 per cent of the total population in 1911 to 7.9 per cent in 1982; similarly Trengganu's percentage declined from 6.6 per cent in 1911 to 4.8 per cent in 1982.

State	1911	1921	1931	1947	1957	1970	1982
Johore	7.7	9.7	13.3	15.0	14.8	14.5	14.4
Kedah	10.5	11.7	11.3	11.3	11.2	10.8	9.8
Kelantan	12.2	10.6	9.6	9.2	8.1	7.8	7.9
Malacca	5.3	5.3	4.9	4.9	4.6	4.6	4.1
Negri Sembilan	5.6	6.1	6.2	5.5	5.8	5.5	5.0
Pahang	5.1	5.0	4.8	5.1	5.0	5.7	7.0
Penang	11.9	10.5	9.5	9.1	9.1	8.8	8.2
Perak	21,1	20.6	20.2	19.4	19.4	17.8	15.7
Perlis	1.4	1.4	1.3	1.4	1.5	1.4	1.3
Selangor	12.6	13.8	14.1	14.5	16.1	18.5	21.8
Trengganu	6.6	5,3	4.8	4.6	4,4	4.6	4.8
Peninsular Malaysia	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 30. Population distribution among the states, Peninsular Malaysia, 1911-1982

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

Table 30 is represented diagrammatically in figure 2 for three of the census years. This diagram also ranks the states according to their population size in 1947, and the shifts in rank give a good idea of the changes in distribution that have taken place over the 26 years 1921-1947, over the 23 years 1947-1970 and over the 13 years 1970-1982. Of significance are the shifts that have taken place in Johore and Pahang, which have moved to higher rankings, while the reverse occurred for Malacca and Kelantan.

(b) Urban-rural distribution

In terms of urban-rural distribution of population, Peninsular Malaysia can be considered rather unusual in the sense that the urban population is well distributed throughout the peninsula and not just concentrated mainly in one or two major cities, as is the case with many other Asian countries. Towns with a population of 10,000 and over being defined as "urban", the various censuses showed a steady increase in the number of urban towns from 22 in 1947 and 38 in 1957 to 49 in 1970.

Table 31 shows the growth and extent of urbanization for each state at various points in

time. It reveals a trend towards more even distribution of the urban population throughout the Peninsular states. Table 32 shows that over the last three censuses, the dominance of Selangor, Perak and Penang has slowly decreased. These three states constituted about 68 per cent of the total urban population in 1947, but this decreased to 64 per cent in 1957, 61 per cent in 1970 and 42 per cent in 1980. Certain states have shown more rapid rates of urbanization, while others have seen less rapid rates. Generally, the more agriculturally-based states have continued to have smaller proportions of their population in urban settlements.

(c) Distribution by ethnic group

There is a strong correlation between the ethnicity of the population and its distribution, especially in Peninsular Malaysia. The three main ethnic groups, Malays, Chinese and Indians, have established themselves in various parts of the peninsula through migration, since the turn of this century. The factor most influencing this phenomenon is the type of occupation that each ethnic group has generally engaged in. Thus the distribution of ethnic groups closely coincides with the types of economic activity in various areas.



Figure 2. Change in population distribution among states, Peninsular Malaysia, 1947, 1970 and 1982

Source: Plotted from data in table 30.

·							
State	1911	1921	1931	1947	1957	1970	1980
Federal Territory				·			100.0
Johore	_	10.1	10.9	15.4	21.8	26.2	63.3
Kedah	_	3.4	4.3	8.2	13.3	12.5	46.4
Kelantan	4.4	3.5	4.1	5.1	9,8	15.1	42.2
Malacca	17.0	20.0	20.4	22.8	24.0	25.0	46.5
Negri Sembilan	_	9.7	9.2	13.2	17.8	21.5	51.9
Pahang		-		_	22.2	18.9	51.9
Penang	37.3	41.8	47.7	52.9	56.7	50.9	65.2
Perak	11.0	13.3	14.4	17.1	25.0	27.6	54.5
Perlis	_	_	-	_	_	_	37.1
Selangor	15.9	23.0	24.8	32.7	43.0	45.4	53.2
Trengganu	9.1	8.1	7.8	11.9	19.0	26.9	65.3
Peninsular Malaysia	10.7	14.1	15.1	18.9	26.5	28.8	6.7

Table 31. Percentage of urban population within each state, Peninsular Malaysia, 1911-1980

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report - 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

Note: "Urban" is defined as all gazetted towns with a population of 10,000 or more.

Table 32. Percentage distribution of urban
population among the states of
Peninsular Malaysia, 1947, 1957,
1970 and 1980

State	1947	1957	1970	1980
Federal Territory				11.2
Johore	12.2	12.2	13.3	13.7
Kedah	4.9	5.6	4.8	5.7
Kelantan	2.4	3.0	4.1	4.1
Malacca	5.9	4.2	4.0	4.8
Negri Sembilan	3.8	3.8	4.1	6.4
Pahang	-	4.2	3.8	5.1
Penang	25.4	19.5	15.6	10.5
Perak	17.5	18.2	17.1	19.2
Perlis				0.6
Selangor	25.0	26.1	29.0	13.2
Trengganu	2.9	3.2	4.2	5.4
Peninsular Malaysia	100.0	100.0	100.0	100.0

Sources: R. Chander, General Report – 1970 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census, vols. I and II (Kuala Lumpur, Department of Statistics, 1983).

Malays are concentrated mainly in the ricegrowing regions of Kedah, Perlis, Kelantan and Trengganu and the coastal fishing areas of the east coast of Peninsular Malaysia and Johore. They are also scattered throughout the west coast states as paddy farmers and rubber smallholders. In recent years, however, there has been a tendency for Malays to move into urban areas as they seek employment in the industrial and commercial sectors.

The Chinese of Peninsular Malaysia are mainly urban dwellers, with 54 per cent of them living in urban areas in 1980. Being mainly engaged in commercial and industrial activities, they are found primarily in urbanized areas of Selangor, Penang and Perak. Their dominance in Perak is also due to the tin mining industry, which is heavily dependent on Chinese labour. Thus the distribution of the Chinese population is concentrated in the west coast states, with some 45 per cent in Selangor and Perak alone. In the case of Indians, they are located mainly where rubber and oil palm estates are found, that is in the west coast states of the peninsula. They are found in relatively larger numbers in Perak and Selangor, which together accounted for about 55 per cent of Indians.

2. Sabah

Although Sabah has an average population density of 13.7 persons per square kilometre (1980), total population is unevenly distributed among the various districts of the State. Sabah can be divided into roughly three regions or zones for the purpose of clarifying population distribution patterns. They are: the west coast zone, the central zone and the east coast zone. Below is a list of districts which fall into each zone:

(a) West coast zone: Labuan, Kuala Penyu, Beaufort, Papar, Penampang, Kota Belud, Kudat;

(b) Central zone: Sipitang, Tenom, Keningau, Tambunan, Ranau, Pensiangan;

(c) East coast zone: Labuk and Sugut, Sandakan, Lahad Datu, Tawau, Semporna, Kinabatangan.

As can be seen from table 33, the west coast zone has over the years 1951-1980 consistently been the residence of more than half of the population of Sabah, though it's proportion may now be on the decline. (Before this period, the Depression years and the Second World War were the major factors that affected the distribution of persons in the area.) The west coast zone is home to a great many agriculturists, as soil conditions are suitable for rice cultivation. This zone also contains the major portion of rubber-industry and commercial activities. Thus the system of infrastructure and communication is best developed in this zone, and this has provided an impetus for more of the population to settle permanently in the area. Most of the urban areas are also located in the west coast zone.

The proportion of population residing in the central zone has been declining. In 1951, its share was 17.2 per cent of the total population; by 1980, this has declined to 13.8 per cent. Development in this part of Sabah had been slow, though there is much rice and rubber land available.³ The lack of

³ Lee Yong Leng, North Borneo (Sabah)...

transportation and other communication facilities in the past have also delayed development, and thus population has generally moved out of the area. This situation is, however, expected to be redressed with improved communications and irrigation schemes in the area.

The east coast zone comprises about half the total land area of Sabah. However, most of the land is sparsely inhabited, except for concentrations of population along the coastline, especially in and around the ports of Sandakan and Tawau. Table 33 shows that the percentage of population in this zone has steadily risen from 28.8 per cent of the total state population in 1951 to 40.7 per cent in 1980. This is probably due to increased industrial activities in the region, plus the fact that the population of the towns of Sandakan and Tawau have been growing at very rapid rates. In 1980 the two towns together made up 55 per cent of the total population of the east coast zone.

3. Sarawak

As in the case of Sabah, Sarawak's population (which is very small in relation to its land area) is unevenly distributed. The heaviest concentration occurs in the west of the State, principally in the districts of the first, third and fourth divisions. The River Rajang, the largest in Sarawak, also supports concentrations of population along it course.

The heavy concentration of population in this western region is attributable to the Brooke administration of the mid-nineteenth century. This was the first area which experienced peace and order, and thus settlement was encouraged. Added to this was the fact that Bau district first attracted Chinese immigrants with the discovery of gold in the 1850s. The presence of Kuching, the capital and chief port of the State is also an important factor which contributes to the heavy concentration of population. The western region of the third division has a great deal of agriculture, largely rubber and pepper around Sibu, Binatang and Sarikei. Sago is also grow in large quantities in this region. These factors account for the large population here.

Almost three quarters of the state of Sarawak is covered with dense primary forest and is uninhabited. This mainly covers the interior areas of the districts of Kapit and Baram.

Table 34 shows that in 1970, 80 per cent of the population was found in western Sarawak (divisions 1, 2 and 3), which constitutes only a little over one fifth of the land area of the State. The remaining population was found in divisions 4 and 5. During this period, division 1 showed a slight increase in its share of population, i.e. from 33.3 per cent in 1960 to 35.9 per cent in 1980. As for division 2, there was a slightly decline in its population from 14.7 per cent in 1960 to 12.8 per cent in 1980. Mean while division 3 showed the most significant change in its population during this period; in 1960, its share was only 18.8 per cent of the total state population; by 1980 its population had increased to 31.5 per cent of the total. As mentioned earlier, this region has seen a great deal of agricultural development in the recent past, which has attracted migrants. In 1960. divisions 4 and 5 contained 33.2 per cent of the

Table 33. Population distribution by zone, Sabah, 1951, 1960, 1970 and 1980(Thousands of persons and per cent)

Zone	1	951	1	960	1	970	1980		
	Number	Proportion	Number	Proportion	Number	Proportion	Number	Proportion	
West coast	183.0	54.8	235.9	51.9	324.3	49.8	454.9	45.3	
Central	57.6	17.2	72.9	16.0	100.2	15.4	138.6	13.8	
East coast	93.5	28.0	145.7	32.1	226.8	34.8	410.0	40.9	
Total	334.1	100.0	454.5	100.0	651.3	100.0	1 003.5	100.0	

Source: Khoo Teik Huat, Population and Housing Census of Malaysia, 1980 : Mukims : Population, Household and Living Quarters (Kuala Lumpur, Department of Statistics, 1982).

Design	1	960	1	970	1980		
Region	Number	Proportion	Number	Proportion	Number	Proportion	
Division 1	248.0	33.3	346.0	35.4	465.3	35.9	
Division 2	109.4 14.7		137.2 14.1		165.4	12.8	
Division 3	140.1	18.8	172.3	17.7	407.7	31.5	
Division 4		22.2	2 • • • •	22.2	210.8	16.3	
Division 5	Division 5 } 247.0		319.5	32.8	45.6	3.5	
Total 744.5		100.0	975.0	100.0	1 294.8	100.0	

Table 34. Population distribution by region, Sarawak, 1980 (Thousands of persons and per cent)

Source: Khoo Teik Huat, Population and Housing Census of Malaysia, 1980 : Mukims : Population, Households and Living Quarters, (Kuala Lumpur, Department of Statistics 1982).

Notes: List of districts in each division:

(a) Division 1: Kuching, Bau, Ulu Sadong (Serian), Hilir Sadong (Simujan) and Lundu;

(b) Division 2: Sri Aman (Simanggang), Lubuk Antu, Saribas and Kalaka;

(c) Division 3: Sibu, Mukah, Kanowit, Oya Dalat, Sarikei, Binatang, Matu Daro, Julau, Kapit, Song and Belaga;

(d) Division 4: Miri, Bintulu and Baram;

(e) Division 5: Limbang and Lawas.

total state population, but this figure declined to only 19.8 per cent in 1980. The Land Dayaks are almost entirely concentrated in the western end of Sarawak in the first division. Some 90 per cent of them live in this area.

D. CONCLUSION

A general comparison of the trends in population size and growth in the three areas of Malaysia, shows several similar features. The most outstanding of these is the fact that external migration has played a part in the growth of the population, though to a lesser extent in Sarawak than in Peninsular Malaysia and Sabah. Also of note is that, since the Second World War, natural increase has been practically the sole contributor to growth in all three areas.

A survey of distribution patterns has also indicated similar traits, in that the population concentrations are naturally found in areas with greater economic resources and opportunities. Furthermore, these urban areas have in total a greater proportion of the non-indigenous population than of the indigenous. An interesting phenomenon that can be observed is that the distribution of population seems to take what might be called a western bias in Malaysia, i.e. the west coast of Peninsular Malaysia, the west coast zone in Sabah and the western end of Sarawak are all more densely populated than other areas.

III. INTERNAL MIGRATION*

INTRODUCTION

The main source of information on internal migration in this country is the population census last taken in 1980. A question on place of birth had been regularly included before this time, but the 1980 Population and Housing Census of Malaysia had additional questions on inter-migration. Apart from the question on place of birth, information was also obtained on the duration of residence (in Malaysia as well as in current locality) and on the last place of previous residence. Much of the analysis of internal migration that is presented below therefore, is based on the 1980 Population and Housing Census of Malaysia, though at times data are also used from the 1970 census mainly for the analysis of trends.

A. LIFETIME MIGRATION

1. Questions and concepts

In the 1970 Population and Housing Census of Malaysia, three questions on place of birth were asked:

(a) "Were you born in Malaysia?" (The enumerator was instructed to tick one of these three answers: Yes, No, Unknown);

(b) "In what state were you born?" (This question was asked only of those who reported themselves as being born in Malaysia, and their responses fell within these 14 catagories: Johore, Kedah, Kelantan, Malacca, Negri Sembilan, Pahang, Penang, Perak, Perlis, Selangor, Trengganu, Sabah, Sarawak, unknown);

(c) "In what country were you born?" (This question was asked of all persons who reported themselves as being born outside Malaysia, and their responses fell into these 12 catagories: Singapore, Thailand, India, Indonesia, Philippines, China, Other Asian, North or South America, Oceania, Europe, others, unknown).

It will be observed from these three questions that the smallest areal unit for which analyses on internal migration can be made is the state. There are a total of 13 states in Malaysia. Eleven states together form Peninsular Malaysia, which is separated from Sabah and Sarawak by up to 1,000 miles of the South China Sea. Thus the term "lifetime interstate migrants" as it is used here, refers to persons who were born in a particular state but were enumerated in another state on the census date. "Lifetime in-migrants" would then refer to persons who were born outside the migration-defining state (within Malaysia) but were enumerated in the migration-defining state at the time of the census. Conversely, the term outmigrants refers to persons who were born in the migration-defining state but who were enumerated in another state (within Malaysia) on the census date. Consequently lifetime net migrants is the balance of in-migrants less outmigrants.

2. Volume

Data on lifetime interstate migrants for the states of Malaysia at the time of the 1970 and 1980 censuses are presented in table 35. It will be observed from this table that there were 1,866,800 lifetime interstate migrants in the country in 1980. In other words, more than 15 per cent of the total population of Malaysia in 1980 was enumerated in a state other than their state of birth.

There was lifetime net migration of roughly 19,000 to the states of Sabah and Sarawak from the states of Peninsular Malaysia in 1980. Of the former two states, Sabah received a much higher number of net migrants, although net migration rates for neither were high relative to some states.

In terms of most likely destination, it will be observed that nearly half of all lifetime migrants had Selangor or Federal Territory as their state of destination in 1980. The state of Pahang was another state which received a substantial number of in-migrants. It absorbed more than 10 per cent of the total. Conversely, a large number of outmigrants originated in Kedah, Johore, Malacca and Negri Sembilan.

^{*} Contributed by Harbans Singh, Department of Statistics.

State	In-m	igrants	Out-m	igrants	Net m	igrants	Net migra	ation rate
	1970	1980	1970	1980	1970	1980	1970	1980
Federal Territory		420.5		123.4		297.1		39.0
Selangor	295.4	409.7	94.3	229.7	201.1	180.0	13.2 ^b	13.5 ^t
Pahang	107.3	236.9	41.3	73.7	66.0	163.2	14.0	23.9
Sabah	18.6	26.8	4.0	9.9	14.6	16.9	2.3	1.8
Sarawak	9.4	19.7	6.0	17.6	3.4	2.1	0.4	0.2
Perlis	16.3	23.7	13.2	26.8	3.1	-3.1	2.6	-2.2
Perak	106.3	136.3	220.0	388.7	-113.7	-252.4	-7.0	-15.7
Kedah	78.6	90.8	103.8	198.0	-25.2	-107.2	-2.6	-10.5
Malacca	48.0	58.1	88.1	149.8	-40.1	-91.7	-9.5	-23.1
Kelantan	19.7	32.9	67.5	121.3	-47.8	-88.4	-6.7	-10.9
Negri Sembilan	75.5	98.4	96.8	160.3	-21.3	-61.9	-4.3	-12.0
Johore	82.2	133.4	86.6	159.5	-4.4	-26.1	-0.3	-1.7
Penang	91.3	127.3	111.1	148.2	-19.8	-20.9	-2.5	-2.4
Trengganu	37.1	52.3	31.0	59.9	6.1	-7.6	1.5	-1.5
Peninsular Malaysia ^C	957.7	1 820.3	975.5 ^d	1 839.3	-18.0	-19.0	-0.2	-0.2
Malaysia ^C	985.7	1 866,8	985.7 ^d	1 866.8	_d	_	_	-

Table 35. Lifetime in-migrants, out-migrants and net migrants by state and region, Malaysia, 1970 and 1980^a

(Thousands of persons and per cent)

Source: Khoo Teik Huat, General Report - 1980 Population and Housing Census, Vol. I (Kuala Lumpur, Department of Statistics, 1983).

^a Figures in this and other tables have been rounded to the nearest hundred persons.

^b These rates are not comparable since the 1970 rate of 13.2 is based on the combined population of Selangor and the Federal Territory, while that for 1980 is based on the population of Selangor, alone.

^c 1980 figures (net interstate migration between Selangor and the Federal Territory) comparable to those for 1970 for Selangor are 617.3 thousand in-migrants and 140.2 thousand out-migrants. As a consequence, 1980 figures for Peninsular Malaysia which are comparable to those for 1970 are 1,607.4 thousand in-migrants and 1,626.4 thousand out-migrants. Similarly, 1980 figures for Malaysia comparable to those for 1970 are 1,653.9 thousand in-migrants and 1,653.9 thousand out-migrants.

^d The figures do not add because 22.0 thousand out-migrants from Peninsular Malaysia to Sabah and Sarawak were not enumerated by state of birth.

On balance, nine states experienced net outmigration and five had net in-migration in 1980. Of the former, the most prominent was Perak, which had a net loss of 252,400 persons. The other three states which experienced significant net losses were Kedah, Kelantan and Malacca. Among the states undergoing net gains, Federal Territory had the greatest number of net migrants, 297,100. The states of Selangor and Pahang followed close behind with net migration of 180,000 and 163,200 persons, respectively.

3. Trends

A comparison of lifetime migration trends is given in table 36 for each of the states of Peninsu-

lar Malaysia in 1970 and 1980. On the basis of the 1970 and 1980 censuses, it is evident that internal migration in Peninsular Malaysia has become a major factor in demographic change. The 1970 census of Peninsular Malaysia indicated that there were 954,000 lifetime interstate migrants, a term which refers to persons who were enumerated in a state other than their state of birth. These lifetime migrants constituted no less than 11.0 per cent of the total population of Peninsular Malaysia in 1970. Furthermore, the 1980 census showed that there were 1,866,800 lifetime interstate migrants in Peninsular Malaysia, i.e. 16.3 per cent of the total population of Peninsular Malaysia in 1980. Thus over the 1970-1980 period, the number of lifetime interstate migrants had increased

	I	ifetime	in-migrant	s	L	ifetime	out-migran	ts	Lifetime net migrants				
States	19	1970		1980		1970		1980		1970		1980	
	No	+	No	+	No	+	No	+	No	+	No	+	
Johore	82.0	6.4	133.4	7.7	86.6	6.8	159.5	9.2	-5.0	-0.4	-26.1	-1.5	
Kedah	78.4	8.2	90.8	7.7	103.8	10.8	198.0	16.8	-25.4	-2.7	-107.2	-9.1	
Kelantan	20.0	2.9	32.9	3.5	61.5	9.9	121.3	12.7	-47.8	-7.0	-88.4	-9.3	
Malacca	48.0	11.9	58.1	11.9	88.1	21.9	149.8	30.7	-40.3	-10.0	-91.7	-18.8	
Negri Sembilan	75.2	15.7	98.4	16.3	96.8	20.2	160.3	26.6	-21.6	-4.5	-61.9	-10.3	
Pahang	107.1	21.3	236.9	28.0	41.3	8.2	73.7	8.7	65.8	13.1	163.2	19.3	
Penang	91.1	11.8	127.3	12.8	111.1	14.4	148.2	14.9	-20.1	-2.6	-20.0	-2.1	
Perak	106.0	6.8	136.3	7.2	220.0	14.1	388.7	20.5	-114.3	-7.3	-252.4	-13.3	
Perlis	16.3	13.5	23.7	15.2	13.2 ⁻	10.9	26.8	17.2	3.1	+2.5	-3.1	-2.0	
Selangor	294.0	18.1	409.7	25.7	94.3	5.8	229.7	14.4	199.7	12.3	180.0	11.3	
Federal Territory			420.4	40.9			123.4	12.0			297.1	28.9	
Trengganu	37.0	9.1	52.3	9.1	31.0	7.7	59.9	10.4	5.9	1.5	-7.6	-1.3	
Peninsular Malaysia	954.0	10.9	1 866.8	16.3	953.7	10.9	1 866.8	16.3	_	_	_	-	

Table 36. Lifetime in-, out- and net interstate migrants for states of
Peninsular Malaysia, 1970 and 1980

(Thousands of persons and per cent^a)

Source: Khoo Teik Huat, General Report - 1980 Population and Housing Census, 1980, vol. I (Kuala Lumpur, Department of Statistics, 1983).

^a Percentages refer to the number of net migrants divided by the total population of a state.

considerably, from 953,700 to 1,866,800 an increase of 95.7 per cent. This growth in interstate migration is particularly significant since over the same period, the total population of Peninsular Malaysia increased only by about 29.7 per cent, from 8.8 million in 1970 to 11.4 million in 1980. Interstate migration thus took place at about triple the rate of population growth.

Since migration is a mechanism whereby individuals attempt to achieve greater well-being from their physical and social environment, it is therefore expected that population will be redistributed wherever maladjustments exist. Viewed in this context, it is important to find out which states are experiencing net gains and which states are losing their population in this redistributive process.

With respect to net migration it will be noticed that while in 1970 there were only four

states undergoing net gains and seven showing net losses, in 1980 there were only three states which gained and nine which lost. In 1970, out of the four states showing net gains, only two of them, namely Selangor and Pahang, had substantial net migration. The states which underwent net losses were Perak, Penang, Malacca and Kelantan, in that order of loss.

Gains and losses among states in 1980 were very much akin to those in 1970. In 1980, Federal Territory and Pahang were the two states showing major net gains. Perlis, which in 1970 showed a small net gain, underwent a similarly small net loss in 1980. All other states continued to experience net losses. For Kedah, the proportion of net outmigrants to total population more than tripled in 1980 as compared to 1970. As for Negri Sembilan, it lost more than twice as many people to other states in 1980 as in 1970.

4. Patterns

The migration pattern that emerges for Peninsular Malaysia can best be described as involving two categories of migrants, one moving to states on the west coast and the other to states on the east coast. These two destinations attract migrants from essentially separate areas or streams. Table 37 and map 2 show the net migration streams between states for 1980. The prime destinations on the west coast are the states of Selangor and Federal Territory. These are the most developed states in Malaysia and represent the administrative, commercial and industrial centre of the country, which has generated vast employment opportunities and therefore continues to attract migrants. Selangor tends to draw migrants primarily from the west coast states especially those contiguous to it. Thus a large proportion of its migrants are from neighbouring states which, though endowed with tin resources, have not been able to provide sufficient employment opportunities to stop the outward flow of their inhabitants. Apart from Perak, other major states of origin are Negri Sembilan, Malacca and Johore.

The other prime destination of migrants, this one situated on the east coast of Peninsular Malaysia, is the State of Pahang. Pahang, the largest state in the peninsula, has a large part of its area still covered by forest and suited for development. Schemes such as the Jengka Triangle and Pahang Tenggara have brought about vast changes through massive land development, which has attracted a large number of migrants. These migrants are essentially from the east coast states of Kelantan and Trengganu, the two least-developed states on the peninsula.

The association of in-migration with states enjoying rapid development and high levels of income, and out-migration with states which are not developing as quickly and have low income levels is indicated by the data presented in table 38. It will be observed that the Federal Territory, the most developed area of the country, had the greatest net migration mostly from the west coast states of Peninsular Malaysia. In 1983, its share in the country's total GDP was slightly more than 14 per cent, and it had the highest level of per capita income, \$M4,045.6. This was more than twice per capita income levels in Perak, Johore, Malacca and Negri Sembilan. Federal Territory drew most of its in-migrants from these four states.

Pahang, the other state which showed substantial in-migration contributed only 6.3 per cent to total GDP, but its level of per capita income relative to those of its neighbouring east coast states of Kelantan and Trengganu was quite high. As might be expected, a large proportion of inmigrants to Pahang were from Kelantan and Trengganu. Per capita income in Pahang was about 1.2 times that of Trengganu and was slightly more than 1.6 times that of Kelantan, the poorest state in Malaysia.

Thus, states with low per capita incomes appear to be the ones losing population through migration. Similarly, states with higher per capita incomes attract migration. However, it is an oversimplification to conclude that low per capita income acts as a push factor, while high per capita income acts as a pull factor. Various other factors need to be taken into account.

The effect of lifetime migration on population distribution can be best summarized by what is known as the "coefficient of redistribution". This measure enables us to compare the actual or census population distribution by states with the distribution that would result if all migrants were returned to their state of origin. This hypothetical distribution is obtained by adding net interstate migration losses to the population of the states that experienced those losses, and subtracting the net gains through interstate migration from the population of the states that realized those gains. The notes to table 39 show the calculation of the coefficient of redistribution for lifetime migration in Peninsular Malaysia in 1970 and 1980.

In 1970, the value of the coefficient was 2.9, that is in order to make the two distributions (i.e. actual population and hypothetical population without migration) equal one another, 2.9 per cent of the total population would have to be relocated. However by 1980, the value of the coefficient had increased to 5.2, which means that nearly twice as much of the population would have to be relocated as compared to 1970. It will be observed that Selangor was the state with the largest coefficient in 1970 and 1980.

		Current state												
Previous state	Johore	Kedah	Kelantan	Malacca	Negri Sembilan	Pahang	Penang	Perak	Perlis	Selangor	Trengganu	Federal Territory	Sabah	Sarawak
Johore		-3,3	-1.6	-4.9	-0.5	-9.9	-1.9	-5.3	_	10.8	-0.7	10.4	•••	
Kedah	3.3		0.9	0.2	0.5	17.0	11.8	5.9	3.3	8.4	0.3	8.4	• • • •	•••
Kelantan	1.6	-0.9		0.2	0.5	13.8	-0.1	-0.7	0.1	5.4	8.3	5.7		
Malacca	4.9	-0.2	-0.2		4.1	4.7	0.1	-0.6	_	11.5	-	12.1	•••	
Negri Sembilan	0.5	-0.5	-0.5	-4.1		4.4	0.4	-1.3	_	11.3	0.4	13.1		• • •
Pahang	-9.9	-17.0	-13.8	-4.7	-4.4		-3.8	-21.7	-1.9	-7.4	-10.1	3.0		•••
Penang	1.9	-11.8	0.1	-0.1	-0.4	3.8		-10.5	-0.2	8.4	0.2	7.8		
Perak	5.3	-5.9	0.7	0.6	1.3	21.7	10.5		0.3	39.2	1.0	34.3	• • •	• • •
Perlis	-	-3.3	-0.1	-	-	1.9	0.2	-0.3		0.8	-	0.9		• • •
Selangor	-10.8	-8.4	-5.4	-11.5	-11.3	7.4	-8.4	-39.2	-0.8		-2,2	-33.8		• • •
Trengganu	0.7	-0.3	-8.3	-	-0.4	10.1	-0.2	-1.0	-	2.2		1.8	•••	
Federal Territory	-10.4	-8.4	-5.7	-12.1	-13.1	-3.0	-7.8	-34.3	-0.9	33.8	-1.8			
Sabah			•••	• • •	• • •	• • •	• • •		• • •	•••	• • •			-1.7
Sarawak	•••		• • •	•••	• • •	• • •	• • •				•••		1.7	

Table 37. Interstate net migration streams during the 10 years preceding the 1980 census, Malaysia, 1980 (Thousands of persons)

Source: Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

Note: No figures are given for migration streams involving Sabah or Sarawak since information on out-migration from Peninsular Malaysia to either of these states is not available by state of origin.



Map 2. Net migration streams between states (during the 10 years preceding the 1980 census), Peninsular Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983, p. 73).

Note: Amount less than 10,000 not shown.

a	Gross dom	Ban anni 4a in anni - 7014	
State	(\$M million)	Per cent of total	Per capita income (SM)
Johore	3 582.2	11.4	2 041.0
Kedah	1 463.9	4.7	1 260.6
Kelantan	974.3	3.1	1 009.8
Malacca	852.1	2.7	1 766.0
Negri Sembilan	1 311.2	4.2	2 183.9
Pahang	1 987.2	6.3	2 187.1
Penang	2 604.9	8.3	2 596.3
Perak	3 536.2	11.3	1 887.8
Perlis	229.8	0.7	1 470.2
Sabah	2 257.0	7.2	2 014.3
Sarawak	2 027.0	6.5	1 441.3
Selangor	5 069.3	16.1	2 979.1
Trengganu	1 082.9	3.4	2 979.1
Federal Territory	4 419.0	14.1	4 045.6
Malaysia	31 398.0	100.0	2 119.9

 Table 38. Gross domestic product and per capita income by state, Malaysia, 1983

Source: Malaysia, Mid-Term Review of the Fourth Malaysia Plan, 1981-1985 (Government Press, 1984).

B. LAST PREVIOUS RESIDENCE

1. Questions, concepts and definitions

One of the limitations of data derived from the question on place of birth is that the migration period is not specified. The category of migrants, as defined from the birthplace data, includes those who came to a place of enumeration a few days before the census date as well as those who came Another limitation of birthplace much earlier. data is that for persons who have migrated more than once, they give no indication of residence at the time of the last move. In order to obtain information on indirect moves, it is necessary to ask the place of last residence. Prior to 1970 such a question had never been included in the population census conducted in this country. However in the 1970 census, questions on place where last lived were included.

The exact questions were as follows:

- (a) "Where did you last live?"
 - (i) In this kampong;

- (ii) Some other town;
- (iii) Other;
- (iv) Outside Malaysia.

(b) "What was the name of the place where you last lived?"

(i) Kampong;
(ii) Town;
(iii) Mukim;
(iv) District;
(v) State

Migrants answering these place-of-residence questions can be divided into two major categories, that is, intrastate migrants and interstate migrants. The former refers to persons whose last move was between localities but within the same state while the latter refers to persons whose last move was from one locality in a certain state to another locality in another state. The term "locality" here refers to any area with a name, for example town,

Table 39. Computation of coefficient of redistribution comparing actual population with
population assuming no migration, Malaysia, 1980

		Actual	population		A	ssuming	no migratio	n	Percenta diffe	nge point rence
	19	70	19	80	19	70	19	80	1970	1980
Johore	1 217.8	12.3	1 569.2	12.0	1 276.2	12.4	1 595.5	12.2	-0.1	-0.2
Kedah	952.4	9.2	1 076.0	8.2	977.6	9.5	1 183.1	9.1	-0.3	-0.9
Kelantan	684.3	6.6	858.2	6.6	732.1	7.1	946.6	7.2	-0.5	-0.6
Malacca	403.1	3.9	441.9	3.4	443.2	4.3	533.6	4.1	-0.4	-0.7
Negri Sembilan	480.1	4.7	548.6	4.2	501.4	4.9	610.3	4.7	-0.2	-0.5
Pahang	503.0	4.9	763.6	5.8	437.0	4.2	600.4	4.6	0.7	1.2
Penang	773.3	7.5	894.8	6.8	793.1	7.7	915.6	7.0	-0.2	-0.2
Perak	1 561.2	15.1	1 731.7	13.2	1 674.9	16.3	1 984.4	15.2	-1.2	-2.0
Perlis	121.0	1.2	144.7	1.1	117.9	1.1	148.2	1.1	0.1	0.0
Selangor (+ Federal Territory)	1 625.6	15.8	2 335.3	17.9	1 434.5	13.8	1 858.6	14.2	2.0	3.7
Trengganu	404.9	3.9	[°] 522.4	4.0	398.8	3.9	529.9	4.1	0.0	-0.1
Sabah	651.3	6.3	950.5	7.3	636.7	6.2	933.7	7.1	0.1	0.2
Sarawak	887.3	8.6	1 233.1	9.4	883.9	8.6	1 231.0	9.4	0.0	0.0
Malaysia	10 319.3	100.0	13 070.4	100.0	10 297.3 ^a	100.0	13 070.4	100.0	0	0

(Thousands of persons and per cent)

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

Notes: Coefficient of redistribution 1970 : $\frac{5.8}{2}$ = 2.9 Coefficient of redistribution 1980 : $\frac{10.3}{2}$ = 5.2

^a Total does not add up to 10,319.3 thousand because 220 thousand out-migrants from Peninsular Malaysia to Sabah and Sarawak were not enumerated by state of birth.

kampong (enclosure, village) or estate. Intrastate migrants can further be subdivided into two categories, that is, intradistrict migrants and interdistrict intrastate migrants. Intradistrict migrants include all persons whose last move was between localities but within the same administrative district of a particular state. Likewise, interdistrict intrastate migrants would include all those persons whose last move was from one locality in a certain administrative district to a locality in another administrative district within the same state.

2. Intrastate (intradistrict and interdistrict) and interstate migrants

Data on the types of migrants as derived from the question on place of last previous residence are presented in table 40. It will be observed that the total number of persons enumerated in 1980 who had moved from one locality to another within Malaysia amounted to 2,392,800.

Another interesting point to be noted is that internal migration in Malaysia, as in many other countries, is distance selective. If migration within versus between different levels of areal units can be taken as an approximation of migration distance, it will be seen that migration is mainly short-distance in nature. Out of the total of 2,392,800 intrastate migrants, 1,300,900 or 33.1 per cent of the total were persons who had migrated from one locality of a district to another locality in the same district. Those migrating to a new district within the same

State	Intra	Intradistrict		Interdistrict		intrastate	Interstate in-migrants	
	1970	1980	1970	1980	1970	1980	1970	1980
Johore	135.5	174.7	127.2	197.5	262.7	372.2	63.0	117.0
Kedah	125.4	151.4	86.9	100.9	212.3	252.3	60.1	75.9
Kelantan	53.4	57.9	70.6	84.6	124.0	142.5	20.8	36.7
Malacca	27.2	54.4	12.7	17.6	39.9	72.0	41.5	48.1
Negri Sembilan	46.6	63.6	35.0	52.2	81.6	115.8	59.0	81.7
Pahang	52.3	89.5	37.1	75.7	89.4	165.2	89.8	197.4
Penang	59.0	99.4	40.4	49.6	99.4	149.0	76.8	107.9
Perak	205.4	236.1	120.0	138.3	325.4	374.4	94.4	127.1
Perlis	23.5	30.7	_	_	23,5	30.7	14.5	20.5
Selangor	234.1	130.7	101.8	105.0	335.9	235.7	200.4	328.2 ^b
Trengganu	40.3	60.0	32.3	44.4	72.7	104.4	32.7	47.7
Federal Territory								303.7
Sabah	66.4	87.6	67.2	84.9	133.6	172.5	1.6	21.7
Sarawak	91.9	64.9	76.2	141.2	168.1	206.1	0.1	18.8
Malaysia	1 161.0	1 300.9	807.4	1 091.9	1 968.4	2 392.8	754.7	1 532.4 ^c

Table 40. Intradistrict, interdistrict and interstate in-migrants by state, 1970 and 1980^a

(Thousands of persons)

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

^a 1980 figures exclude visitors.

^b 1980 figures comparable to those for 1970, were 440.6 thousand, or 18.7 per cent.

^c 1980 figures comparable to those for 1970, were 1,341.1 thousand, or 10.3 per cent.

state totalled 1,091,900, that is 27.8 per cent of total migrants. Intrastate migrants represented 61.0 per cent of total migrants. The share of interstate migrants amounted to 39.0 per cent of total migrants. This supports the generally held view that the tendency to migrate varies inversely with the distance moved.

C. PLACE OF LAST PREVIOUS RESIDENCE BY DURATION OF RESIDENCE

The data derived from the census questions on place of last previous residence are not very useful alone, like birthplace data they do not reveal the timing of migration. However, if data on place of last previous residence is cross-classified with data derived from questions on the duration of residence, the resulting information can help quantify the time dimension of internal migration. In the 1970 census, two questions on duration of residence were asked. One question was with respect to the length of residence in Malaysia. The other question, one particularly useful in the context of internal migration, was with respect to the duration of residence in the present locality. Comparability with past data is however limited since the duration of residence question was not asked in censuses conducted prior to 1970.

The present analysis' employs data derived from a cross-tabulation of place of last previous residence with duration of residence. The term "non-migrant" here refers to persons who have always lived in their locality of birth. In analysing "Migrants", only recent migrants have been used, that is persons who shifted locality at some time during the past five or ten years. It is also important to note that migration is not a random process. Migration streams are generally made up of certain types of people in larger proportions than other types; in other words, migration is selective according to various economic and demographic factors.

1. Sex, age and ethnic background

An examination of the sex composition of persons moving between localities during the period 1970-1980 reveals that migration was sexselective in the sense that there were more male migrants than female, although this phenomenon has not predominated, particularly in Peninsular Malaysia. Table 41 shows that in 1980, for every 100 female migrants there were 102 male migrants in Peninsular Malaysia, and for every 100 female migrants in Sabah and Sarawak, there were 126 and 119 male migrants, respectively. Malays made up the largest group of migrants, except in Sarawak, where the largest group of migrants was Iban.

Selectivity of migrants by age is apparent from table 42. In 1980, about 58 per cent of total migrants over the previous 10 years were aged 15-39. Out of this figure, 30 per cent were aged 20-29.

Table 41. Internal migrants during the 10 years preceding the 1980 censusby sex, ethnic group and region, Malaysia, 1980

	Internal migra	ants (thousands)	Sex	ratio
Region and ethnic group	Male	Female	Internal migrants	Total population
Peninsular Malaysia				<u> </u>
Malay	777.8	760.2	102	98
Chinese	286.5	291.3	98	100
Indian	132.2	127.1	104	106
Other	5.5	5.2	106	106
Total	1 202.0	1 183.8	102	100
Sabah				
Pribumi	67.2	53.2	126	109
Chinese	16.6	13.7	121	110
Other	1.4	0.8	175	163
Total	85.2	67.7	126	109
Sarawak				
Malay	27.3	19.9	137	102
Melanau	6.3	4.9	129	97
Iban	27.1	23.6	115	97
Bidayuh	4.9	4.3	114	99
Other indigenous	3.5	2.7	130	104
Chinese	26.1	24.8	105	103
Other	1.4	0.9	156	136
Total	96.6	81.1	119	101

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

A ge group	Internal migrants	Non-migrants ^a	Internal migrants	Non-migrants ^a	
Age group	(thous	ands)	(Per cent)		
0 - 4	216.1	1 508.7	8	18	
5 - 9	309.5	1 408.4	11	17	
10 - 14	274.9	1 245.0	10	15	
15 - 19	340.7	982.6	13	12	
20 - 29	821.6	1 153.0	30	14	
30 - 39	419.6	744.8	15	9	
40 - 49	174.5	573.2	6	7	
50 - 59	86.7	386.4	3	5	
60 +	73.0	323.5	3	4	
Total	2 716.6	8 325.6	100	100	

Table 42. Internal migrants during the 10 years preceding the 1980 censusby age group, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

^a Those who have always lived in their state of birth.

Table 43. Internal migrants, male and female, by reason for migrating, Malaysia, 1980

		Number (thousand	Percentage distribution			
Reasons	Male	Female	Total	Male	Female	Total
On work transfer	346.3	79.5	425.8	16	4	10
To look for job ^a	202.0	75.7	277.7	10	4	7
To start job offered	145.4	57.8	203.2	7	3	5
For better income	106.7	30.4	137.1	5	1	3
Rural development project	79.7	35.2	114.9	4	2	3
Education	105.3	81.0	186.3	5	4	4
Marriage	104.0	496.2	600.2	5	23	14
To follow family	684.4	988.0	1 672.4	33	46	40
Shifting cultivation	6.6	4.5	11.1	_	_	_
Other	205.6	153.7	359.3	10	7	8
Unknown	115.8	122.8	238.6	5	6	6
Total	2 101.8	2 124.8	4 226.6	100	100	100

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

^a Including "believe no suitable work available in previous locality".

2. Reason for migrating

The main reasons migrants moved to the residence where they were enumerated are set out in table 43. "To follow family" was the reason of the highest number, or 40 per cent of total migrants. Of this figure, females formed 46 per cent and males accounted for 33 per cent. More females than males also gave the reason "marriage". Otherwise, the number of males exceeded that of females, especially for the reasons "on work transfer", "to look for job", "to start job offered", "for better income" and "rural development project". Two to four times more male than female migrants gave one of these as their reason.

3. Highest level of education attained

A comparison of migrants with reference to highest level of education attained indicates that migration has been highly selective of bettereducated people. This was true for all age groups, as can be seen in table 44. For all ages 10 years and above, only about 7 per cent of non-migrants had attained an educational level of upper secondary or above, while 15 per cent of migrants 1965-1970 had attained this level.

4. Fertility

It will be observed from table 45 that generally migrant females had lower fertility levels than non-migrant females. Stated differently, high fertility appears to have acted as a deterrent to migration. This is not surprising, for it is easier in terms of cost and effort to move a small family than a large one. The turning point in this respect fell between the two- and three-child families.

However, age is a factor that must be given consideration as well, as noted above, migration streams are composed of disproportionately large numbers of youthful persons. By controlling for age, similar patterns of fertility were observed, that is non-migrants still had higher fertility than migrants. Also, the larger the number of children ever born, the lower was the propensity to migrate among all age groups. For ages 30-39, the critical family size large enough to discourage migration seems to be between four and five children.

5. Labour-force participation rates and unemployment rates

Table 46 gives age-specific rates of participation in the labour force for both sexes. For the age group 10 years and above, migrants had higher participation rates than non-migrants for both males and females, although this was more pronounced for the former.

It can also be seen that for males, participation rates of migrants were consistently higher than those of non-migrants in age groups up to and including 40-49, after which the pattern was reversed. Differentials between rates for male and non-migrants were particularly migrants noticeable for the age groups 10-14 and 15-19. Migrants apparently enter the labour force earlier. and the process of migration appears to have been a way of gaining entrance to the labour force. As for the lower labour-force participation rates amongst migrants over 50 years of age, this could possibly be due to retired persons migrating to live with their children or other relatives.

Labour force participation rates for female migrants were rather peculiar. Female migrants had lower labour-force participation rates than female non-migrants in all but three age categories, namely 10-14, 15-19 and 20-24. Perhaps the older women who moved into an unfamiliar labour market found themselves less qualified than other younger women for the jobs available.

According to the equilibrium theory, migration operates to move the unemployed from areas of excess labour supply to areas of insufficient supply. The unemployment rates shown in table 47 would seem to lend some support to this argument. Both male and female migrants had lower unemployment rates than non-migrants. This was especially so in the younger age groups. For males, lower unemployment rates were observed till the age of 40, after which the situation was reversed. In the case of females, lower unemployment rates were observed up to the age of 30, after which there was a reversal in this trend. Lower unemployment rates among female migrants as compared to non-migrants were particularly pronounced in the age groups 10-24.

Highest level of	Non- migrant ^a	Migrant 1965-1970	Non- migrant ^a	Migrant 1965-1970	Non- migrant ^a	Migrant 1965-1970		
attained	10-1	9 years	20-2	20-29 years		30-39 years		
No schooling	7.2	8.5	17.1	11.6	38.3	24.6		
Primary	59.5	54.1	59.4	51.9	51.8	54.2		
Lower secondary	26.5	25.9	11.3	13.4	4.5	7.3		
Upper secondary	6.3	9.9	10.0	16.6	4.3	9.1		
Post-secondary	0.5	1.5	1.5	4.0	0.5	1.7		
University	0.0	0.0	0.2	0.9	0.2	1.4		
Other tertiary	0.0	0.0	0.4	1.7	0.5	1.7		
Total Number	100.0 1 575 165	100.0 300 160	100.0 677 122	100.0 320 580	100.0 468 161	100.0 162 148		
	40-49	9 years	50-5	9 years	60 years a	nd over		
No schooling	53.9	37.7	65.3	52.8	77.9	67.8		
Primary	41.1	49.3	30.5	37.5	19.8	27.3		
Lower secondary	2.5	4.6	1.9	3.5	1.1	2.1		
Upper secondary	2.1	5.5	1.9	4.5	1.0	2.1		
Post-secondary	0.2	1.1	0.1	0.7	0.1	0.4		
University	0.1	0.9	0.0	0.4	0.0	0.2		
Other tertiary	0.2	0.9	0.1	0.6	0.0	0.2		
Total Number	100.0 330 127	100.0 78 302	100.0 204 486	100.0 46 787	100.0 168 530	100.0 37 074		
	- <u></u>	otal						
No schooling	24.9	19.2						
Primary	53.0	51.1						
Lower secondary	15.4	14.7						
Upper secondary	5.8	11.1						
Post-secondary	0.6	2.2						
University	0.1	0.7						
Other tertiary	0.2	1.0						
Total Number	100.0 3 423 591	100.0 945 051						

Table 44. Percentage distribution of migrants and non-migrants in age groups 10 yearsof age and over by educational level attained, Peninsular Malaysia, 1970

Source: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977). ^a Those who have always lived in their state of birth. Table 45. Percentage distribution of ever-married women 10 years of age and over in each ageand migrant status categoryby number of children ever born, Peninsular Malaysia,1970

Children ever	Non- migrants ^a	Migrants 1965-1970	Non- migrants ^a	Migrants 1965-1970	Non- migrants ^a	Migrants 1965-1970	
born alive	10-19 years		20-2	9 years	30-39 years		
No children	16.9	28.4	7.6	11.5	2.3	3.4	
1-2 children	27.1	41.0	41.5	49.9	14.6	20.5	
3-4 children	1.7	2.0	31.6	22.8	24.9	26.1	
5-6 children	0.2	0.1	11.4	7.2	27.6	24.4	
7 or more	0.3	0.3	2.4	1.7	28.0	22.6	
Not stated	53.9	28.1	5.4	7.0	2.5	3.0	
Total Number	100.0 72 826	100.0 30 576	100.0 214 359	100.0 119 283	100.0 225 594	100.0 66 912	
	40-49 years		50-5	9 years	60 years and over		
No children	2.9	3.5	4.2	3.9	5.2	4.2	
1-2 children	13.3	16.8	17.2	20.6	20.0	25.0	
3-4 children	19.0	30.4	21.5	23.1	23.6	23.6	
5-6 children	21.1	19.9	20.9	20.2	20.4	18.8	
7 or more	41.2	35.6	32.8	27.8	26.6	22.4	
Not stated	2.5	3.4	3.3	5,3	4.1	6.0	
Total Number	100.0 173 282	100.0 31 451	100.0 105 063	100.0 19 463	100.0 88 014	100.0 15 734	
	T	otal					
No children	5.5	9.6					
1-2 children	22.8	34.9					
3-4 children	22.9	21.2					
5-6 children	18.6	13.4					
7 or more	22.5	13.2					
Not stated	7.7	7.7					
Total Number	100.0 879 138	100.0 283 419					

Source: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, (Kuala Lumpur, Department of Statistics, 1977). ^a Those who have always lived in their state of birth.

	N	Male	Fer	nale
Age group	Non-migrant ^a	Migrant 1965-1970		Migrant 1965-1970
10 - 14	7.9	11.4	6.9	9.6
15 - 19	50.5	58.5	32.1	34.4
20 - 24	86.2	87.5	25.0	36.9
25 - 29	92.1	95.0	39.6	34.8
30 - 34	92.9	95.7	40.3	34.2
35 - 39	92.7	95.7	41.0	35.5
40 - 44	91.5	94.5	41.3	35.8
45 - 49	90.0	92.2	43.0	35.8
50 - 54	86.0	85.9	40.3	30.9
55 - 59	77.3	71.0	34.9	23.4
60 - 64	69.7	61.9	29.6	18.1
65 +	52.9	44.8	17.8	9.8
Total	58.1	91.9	29.5	30.3

Table 46. Labour-force participation rates of male and female migrants and non-migrants 10 years
of age and over by age group, Peninsular Malaysia, 1970

(Per cent)

Source: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977). ^a Those who have always lived in their state of birth.

Table 47. Unemployment rates of male and female migrants and non-migrants 10 yearsof age and over by age, Peninsular Malaysia, 1970

(Per cent)

	r	Male	Female		
Age group	Non-migrant ^a	Migrant 1965-1970	Non-migrant ^a	Migrant 1965-1970	
10 - 14	19.2	15.3	19.4	14.2	
15 - 19	16.3	12.1	19.5	15.5	
20 - 24	8.0	4.6	12.2	8.5	
25 - 29	3.1	2.0	4.0	3.9	
30 - 34	2.0	1.6	2.3	2.9	
35 - 39	1.7	1.5	2.0	2.8	
40 - 44	1.5	1.6	1.6	2.1	
45 - 49	1.3	1.7	1.4	2.0	
50 - 54	1.0	1.8	1.4	1.9	
55 - 59	1.0	2.1	1.5	2.3	
60 - 64	0.8	1.6	1.7	3.4	
65 +	0.8	1.3	2.3	3.0	
Total	6.0	4.0	8.6	7.6	

Source: R. Chander, General Report - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

^a Those who have always lived in their state of birth.

6. Occupation and industrial sector

The occupational distribution of migrants and non-migrants is shown in table 48. It will be seen from this table that both male and female migrants have a pronounced tendency to pursue non-agricultural occupations. It will be noticed that there are much higher concentrations of migrants in the service occupations as compared with non-migrants. Another noteworthy point is that migrants tend to be over-represented in occupations requiring higher levels of education, specifically the category "professional, technical and related". This is not unexpected since it has been noted above that migration tends to be selective of those who have attained higher levels of education.

Table 49 shows distribution of migrants and non-migrants by industrial sector. It will be noted that in the category "agriculture, forestry, hunting and fishing" migrants were heavily underrepresented, and that the largest proportion of migrants were employed in service industries. Another growth industry which has provided employment for relatively large number of migrants is manufacturing. The utilities and the mining and quarrying industries, as well as the transportation, storage and communications industries have also employed larger proportions of migrants than of non-migrants. Thus migrants are primarily engaged more in modern, urban types of industries and less in traditional, rural, agriculturally-based industries.

D. PLACE OF BIRTH, OF LAST PREVIOUS RESIDENCE AND OF ENUMERATION

Since the 1970 census included questions on birthplace, last previous residence and place of enumeration, a cross-tabulation of these three items of information yields data on multiple moves as well as on the extent of return migration. With regards to multiple moves, it is possible to classify persons as being primary or secondary migrants. Primary migrants here are taken to include two categories of persons: (a) those whose state of birth was the same as their state of previous residence, but were at the time of the census found in another state; and (b) those who were born in

Fable	48 .	Percentage distribution of male and female migrants, and non-migrants 10 years
		of age and over by occupation, Peninsular Malaysia, 1970

	I	Male	Female		
Occupation	Non-migrant ^a	Migrant 1965-1970	Non-migrant ^a	Migrant 1965-1970	
Professional, technical and related workers	3.1	7.5	3.4	10.7	
Administrative and managerial workers	0.7	1.3	0.1	0.1	
Clerical and related workers	4.4	6.9	3.4	6.3	
Sales workers	9.2	7.0	4.4	3.3	
Service workers	4.0	16.2	6.0	15.4	
Agriculture, animal husbandry, forestry, fishing and hunting	48.6	30.4	56.1	41.1	
Product, transport equipment operators and labourers	21.5	25.1	11.1	10.2	
Activities inadequately described	1.1	1.2	9.9	8.9	
Unemployed/not stated	7.5	4.5	5.6	3.9	
Total labour force	100.0	100.0	100.0	100.0	
Number	977 236	372 476	514 217	133 366	

Source: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977). ^a Those who have always lived in their state of birth.

Industry	Non- migrant ^a	Migrant 1965-1970	
Agriculture, forestry, hunting and fishing	27.4	10.8	
Agricultural products requiring substantial processing	24.7	24.3	
Mining and quarrying	1.1	3.6	
Manufacturing	8.8	10.0	
Construction	2.1	2.1	
Electricity, water, gas and sanitary services	0.5	0.9	
Commerce	8.6	8.2	
Transport, storage and communications	3.1	3.5	
Services	11.9	28.6	
Activities not adequately described	4.1	3.1	
Unemployed/not stated	7.5	5.0	
Total labour force	100.0	100.0	
Number	1 491 453	505 842	

Table49. Percentage distribution of migrants and
non-migrants 10 years of age and over
by industry, Peninsular Malaysia, 1970

Source: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

^a Those who have always lived in their state of birth.

another state, but whose last previous residence was in the state in which they were enumerated in the census. Secondary migrants here include all persons whose birthplace, place of last previous residence and place of enumeration were all located in different states. These categories of migrants can be further classified according to the distance of their move, that is, whether it involved movement to contiguous or non-contiguous states.

1. Return migrants

The extent of return migration can be seen in table 50. It will be observed that in 1970, there was a total number of 92,704 return migrants in Peninsular Malaysia. Thus out of the total population of Peninsular Malaysia of 8,780,728 in 1970, about 1.05 per cent were return migrants.

Another important observation is that return migration was predominantly from contiguous states. Out of the total of 92,704 return migrants in Peninsular Malaysia, 66,919 persons, or some 72 per cent returned to a previous state of residence from a contiguous state, and only 25,785, or 28 per cent returned from non-contiguous states. Thus there were nearly three migrants returning from contiguous states for every one returning from a non-contiguous state. An analysis by state

Migration- defining state	Contiguous states		Non-contiguous		Total		Per cent of
	Number	Per cent	Number	Per cent	Number	Per cent	state population
Johore	3 982	49.7	4 026	50.3	8 008	100	0.62
Kedah	8 700	81.5	1 975	18.5	10 675	100	1.12
Kelantan	3 535	67.0	1 743	33.0	5 278	100	0.77
Malacca	3 944	59.2	2 7 1 4	40.8	6 658	100	1.65
Negri Sembilan	7 822	84.2	1 467	15.8	9 289	100	1.93
Pahang	2 276	89.4	269	10.6	2 545	100	0.50
Penang	7 079	71.1	2 872	28.9	9 951	100	1.28
Perak	16 468	81.1	3 833	18.9	20 301	100	1.30
Perlis	1 055	59.9	705	40.1	1 760	100	1.45
Selangor	10 098	66.4	5 121	33.6	15 219	100	0.93
Trengganu	1 960	64.9	1 060	35.1	4 020	100	0.74
Total	66 919	72.2	25 785	27.8	92 704	100	1.05

Table 50. Return migrants from contiguous and non-contiguous states, Peninsular Malaysia, 1970

Source: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).
also shows similar patterns. Except for the State of Johore, which had less than half of its return migrants coming from contiguous states, in all states a substantial number of return migrants came from contiguous states. It will be observed that for the State of Pahang, nearly 90 per cent of return migrants to the State came from bordering states. The states of Kedah, Negri Sembilan and Perak also had a large proportion of their return migrants coming from bordering states, indeed no less than 80 per cent.

Calculations of return migrants as a proportion of state population show that the rate of return migration was greatest for the State of Negri Sembilan; nearly 2 per cent of the population of that State in 1970 consisted of return migrants. Other states which saw substantial return migrants. Other states which saw substantial return migrants migrants were Malacca, Perlis, Perak and Penang. Pahang had the lowest proportion of return migrants in its population, only 0.5 per cent.

2. Primary migrants

Table 51 shows the state of destination of primary migrants originating from contiguous and non-contiguous states. It will be observed that at the macro, or the Peninsular Malaysia level, 686,504 persons, or approximately 7.8 per cent of the total population of the peninsula in 1970 were primary migrants. Out of the total of 686,504 primary migrants, 509,976, or 74 per cent originated in contiguous states, while noncontiguous states provided only 26 per cent of total primary migrants. Thus for every one primary migrant originating from non-contiguous states, there were nearly three primary migrants originating from contiguous states. This proportion appears to be similar to that for return migrants above.

An analysis of primary migrants by various states of destination also shows that most originated from contiguous states. Some 97 per cent of primary migrants to the State of Pahang originated from bordering states. The states of Negri Sembilan, Perak, Kedah and Kelantan also received a large number of their primary migrants from bordering states. The lowest on this score was the State of Malacca which received only about half of its primary migrants from bordering states.

An analysis of primary migrants as a proportion of state population reveals that in Pahang, Negri Sembilan and Malacca had more than 10 per cent of the population were primary migrants. In

State of	Contigue	Contiguous states		ntiguous	То	Per cent of	
destination	Number	Per cent	Number	Per cent	Number	Per cent	state population
Johore	30 057	51.2	28 647	48.8	58 704	100.0	4.61
Kedah	59 495	79.7	15 159	20.3	74 654	100.0	7.83
Kelantan	33 651	74.8	11 348	25.2	44 999	100.0	6.57
Malacca	21 601	50.3	21 359	49.7	42 960	100.0	10.65
Negri Sembilan	47 623	87.5	6 792	12.5	54 415	100.0	11.33
Pahang	84 005	97.2	2 4 1 4	2.8	86 419	100.0	17.17
Penang	39 101	64.1	21 880	35.9	60 981	100.0	7.88
Perak	114 154	85.9	18 670 ⁻	14.1	132 824	100.0	8.50
Perlis	5 024	57.1	3 768	42.9	8 792	100.0	7.26
Selangor	63 851	62.1	38 891	37.9	102 742	100.0	6.32
Trengganu	11 414	60.0	7 600	40.0	19 014	100.0	4.69
Total	509 976	74.3	176 528	25.7	686 504	100.0	7.81

Table 51. Primary migrants by contiguous and non-contiguous states, Peninsular Malaysia, 1970

Source: R. Chander, General Report - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Johore and Trengganu however, primary migrants constituted no more than 5 per cent of the state population.

3. Secondary migrants

The 1970 census indicated that there were a total of 87,710 secondary migrants, approximately 1 per cent of the total population of Peninsular Malaysia. This can be seen in table 52.

One major observation that can be made with regards to secondary migrants when compared to return migrants and primary migrants, is that secondary migrants are less restrained by distance. This can be seen from their movement to more non-contiguous states. It will be observed that in the first move of the total secondary migrants in Peninsular Malaysia, 53.2 per cent moved to contiguous states. The percentage of secondary migrants who in their second move went to bordering states was 51.4. As noted above, of total return migrants, 72.2 per cent returned from contiguous states, and of total primary migrants 72.2 per cent originated from contiguous states. This illustrates that secondary migrants, essentially a more mobile group of persons, are more likely to move longer distances.

State of	Contiguo	ous states	Non-contig	guous states	Total	
State of Destination Johore Kedah Kelantan Malacca Negri Sembilan Pahang Penang Perak Perlis Selangor Trengganu Total Johore Kedah Kelantan Malacca Negri Sembilan Pahang Penang			Move No. 1	a		
Johore	3 698	41.6	5 181	58.4	8 879	100.0
Kedah	4 308	63.6	2 465	36.4	6 773	100.0
Kelantan	1 501	34.7	2 821	65.3	4 322	100.0
Malacca	2 180	43.1	2 877	56.9	5 057	100.0
Negri Sembilan	5 838	59.2	4 026	40.8	9 864	100.0
Pahang	6 451	69.6	2 812	30.4	9 263	100.0
Penang	4 388	61.4	2755	38.6	7 143	100.0
Perak	9 263	61.1	5 905	38.9	15 168	100.0
Perlis	539	24.0	1 707	76.0	2 246	100.0
Selangor	7 807	47.6	8 603	52.4	16 410	100.0
Trengganu	696	26.9	1 889	73.1	2 585	100.0
Total	46 669	53.2	41 041	46.8	87 710	100.0
			Move No. 2	b		
Johore	3 809	40.0	5 723	60.0	9 532	100.0
Kedah	4 183	64.9	2 260	35.1	6 443	100.0
Kelantan	1 299	37.0	2 215	63.0	3 514	100.0
Malacca	2 683	37.7	4 429	62.3	7 112	100.0
Negri Sembilan	5 088	57.1	3 826	42.9	8 914	100.0
Pahang	4 454	73.6	1 599	26.4	6 053	100.0
Penang	4 557	59.1	3 160	40.9	7 717	100.0
Perak	6 985	65.0	3 766	35.0	10 751	100.0
Perlis	341	25.0	1 021	75.0	1 362	100.0
Selangor	10 907	45.6	12 998	54.4	23 905	100.0
Trengganu	761	31.6	1 646	68.4	2 407	100.0

Table 52. Secondary migrants by states of destination and origin (contiguous
and non-contiguous states), Peninsular Malaysia, 1970

(Number of persons and per cent)

Source: R. Chander, General Report - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1973).

42 643

48.6

100.0

87 710

^a This move is determined by comparing the state of birth with the state in which the place of last previous residence was located.

^b This move is determined by comparing the state in which the place of last previous residence was located within the state in which the person was enumerated on census day of 1970.

51.4

45 067

Total

IV. LEVELS, TRENDS AND PATTERNS OF URBANIZATION IN PENINSULAR MALAYSIA, 1957-1980*

INTRODUCTION

The urbanization of a country is closely connected with the other important policy issues of internal migration and socio-economic development. In Malaysia, urbanization has in the recent past become a major concern and has received a considerable amount of attention from writers of diverse interests.¹ Its importance as an integral part of socio-economic development in Malaysia was clearly recognized by the Second Malaysia Plan:

> "The introduction of modern industries in rural areas and the development of new growth centres in new areas and the migration of rural inhab-

Hamzah Sendut, 'Patterns of Urbanization in Malaya 1931-1975'', Kajian Ekonomi Malaysia, 1965, pp. 87-103;

Ooi Jin Bee, "Urbanization and the urban population in Peninsular Malaysia – 1970", Journal of Tropical Geography, vol. 40 (1975), pp. 40-47;

J.C. Caldwell, "Urban growth in Malaya: trends and implications", Population Studies, vol. 7, No. 1 (1963), pp. 39-50;

Charles Hirschman and Yeoh Suan-Pow, "Ethnic patterns of urbanization in Peninsular Malaysia, 1947-1970", Southeast Asian Journal of Social Science, 1979, pp. 1-14;

Charles Hirschman, "Recent urbanization trends in Peninsular Malaysia", Demography, 1976, pp. 445-462.

ESCAP, Comparative Study on Migration, Urbanization and Development in the ESCAP Region: Migration Urbanization and Development in Malaysia (New York, United Nations, 1982);

K.L. Kok, Levels, Trends and Patterns of Urbanization, Discussion Paper No. 2 (Kuala Lumpur, Population Studies Unit, University of Malaya, 1981); and

itants to urban areas are essential to economic balance between the urban and rural areas and the elimination of the identification of race with vocation as well as location".²

Thus, the movement of rural people to towns is also seen as an essential aspect of the New Economic Policy of the Malaysian Government to narrow the economic gap between ethnic communities. However, there is obvious concern about the undesirable effects of migration from rural to urban areas, as expressed in the following statement:

> "Regional mobility from depressed to more progressive areas including from rural to urban centres occur through migration as the natural result of push-and-pull factors. Unchecked and unguided, this socio-economic phenomenon can enhance unemployment or poverty in the urban centres".³

This chapter will, therefore, not only examine the levels, trends and patterns of urbanization, especially in the two intercensal periods 1957-1970 and 1970-1980 (since Peninsular Malaysia, then Malaya, achieved independence in 1957), but also consider their consequences and implications. Sabah and Sarawak, which together with Peninsular Malaysia formed Malaysia in 1963, have been excluded from this study because of their separate historical, social and economic background and their separate immigration policy.

Studies on urbanization often encounter problems as the definition of an urban area often varies from one country to another and over time within the same country. Here the Malaysian

^{*} Contributed by Kok Kim Lian, University of Malaya.

¹ Saw Swee Hock, 'Patterns of urbanization in West Malaysia, 1911-1970," *Malayan Economic Review*, vol. 17 (1972), pp. 114-120;

Suresh Narayan, 'Patterns and implications of urban change in Peninsular Malaysia'', *Malayan Economic Review*, 1975, pp. 55-71;

Syed Warseen Ahmad, "Urbanization in Peninsular Malaysia: 1911-1970 – trends and implications", paper presented at Seminar on Labour Supply under joint sponsorship of Council for Asian Manpower Studies and Organization of Demographic Associates, Makati, Rizal, Philippines, 21-25 June, 1976.

² Malaysia, Second Malaysia Plan 1971-1975 (Kuala Lumpur, Government Printer, 1971), p. 45.

³ Malaysia, *Third Malaysia Plan*, 1976-1980 (Kuala Lumpur, Government Printer, 1976), p. 97.

Government's latest definition of an urban area as a gazetted area of 10,000 or more persons⁴ will be used.

A. PATTERNS OF URBANIZATION, 1911-1980

Data on the urban population and the level of urbanization in Peninsular Malaysia are only available from the seven censuses over the period 1911 to 1980. These are given in table 53. During this period it is clear that the urban population grew at a faster rate than the total population. Consequently, the proportion of the urban population to the total population during the 70-year period rose from 10.7 to 37.2 per cent. However over the six intercensal periods, different rates of increase in the level of urbanization were seen.

Between 1911 and 1921 a fairly rapid rate of urbanization was recorded: the share of the urban population to total population increased from 10.7 to 14.0 per cent. During the next $2\frac{1}{2}$ decades the increase was smaller, from 14.0 per cent in 1921 to 18.9 per cent in 1947. This is confirmed by the average annual exponential rate of growth of the urban population, which was 4.86 per cent for the period 1911-1921 and only 3.05 per cent for the period 1931-1947. In general, the principal cause of the growth of urban population prior to the Second World War was immigration. The demand for cheap labour for the mine and plantation economy, which quickly expanded in the colonial setting, was satisfied by importing Indian and Chinese workers. They were concentrated largely in towns whose formation and growth could be traced to the development of tin, rubber and commerce.⁵

During the first intercensal period after the War, the pace of urbanization accelerated, resulting in the proportion of urban dwellers increasing to 26.6 per cent in 1957. This upsurge is also reflected by the average annual growth rate of urban population which increased to 5.84 per cent for the period 1947-1957. This rapid increase in the urban population has been attributed to the declaration of the Malavan Emergency in 1948. which for many years caused countless families to leave their homes in the dangerous remote rural districts for new ones in the relative security of towns.⁶ Other families underwent compulsory relocation into government-organized "new villages" protected by barbed-wire fencing and under the tight control of security forces.⁷ At the same time, there was also spontaneous rural-to-

Year	Total population	Urban population	Per cent urban to total population
1911	2 339 000	250 273	10.7
1921	2 906 691	406 936	14.0
1931	3 787 758	570 513	15.1
1947	4 908 086	929 928	18.9
1957	6 267 955	1 666 969	26.6
1970	8 819 928	2 530 433	28.7
1980	10 944 800	4 073 105	37.2

Table 53. Percentage of urban to total population, Peninsular Malaysia, 1911-1980

Sources: J.E. Nathan, The Census of British Malaya-1921 (London, Waterlou and Sons, 1922).

M.V. Del Tufo, A Report on the 1947 Census of Population (Kuala Lumpur, Government Printer, 1949).

H.A. Fell, 1957 Population Census, Federation of Malaya, Report No. 14 (Kuala Lumpur, Department of Statistics, 1960). Malaysia, Annual Statistical Bulletin 1970 (Kuala Lumpur, Department of Statistics, 1971). Malaysia, Annual Statistical Bulletin 1982 (Kuala Lumpur, Department of Statistics, 1983).

⁴ The process of gazetting an area is an administrative act of the Government, one consequence of which is that the area is mapped and boundaries are established.

⁵ Hamzah Sendut, loc. cit.

⁶ Saw Swee Hock, *loc. cit.*

⁷ W.C.S. Corry, A General Survey of Villages, Report to High Commissioner of the Federation of Malaya (Kuala Lumpur, Government Printer, 1954).

urban migration owing primarily to the lack of employment opportunities in rural areas.

All the above factors might have contributed to the slow growth of the rural population during the period 1947-1957 (table 54). Although such economic and social factors continued to operate in the intercensal period 1957-1970, rural-to-urban drift, for security reasons, had ceased completely well before the end of the Emergency in 1960.⁸ Normalization of conditions may have resulted in a slight reversal of the trend of rural-to-urban migration as some of those in the urban areas who had originally been rural dwellers returned to their farms formerly made unsafe by terrorists. However, it is likely that the majority of those relocated to the new villages remained there.⁹ This process of stabilization is probably the main explanation for the somewhat slower pace of urbanization in the intercensal period 1957-1970.10

In the 1960s, the launching of the various land schemes located in the rural areas of a few land-rich states, such as Pahang, may have detained rural inhabitants who would otherwise have migrated to urban areas. The proportion of urban to total population increased from 26.6 per cent in 1957 to only 28.7 per cent in 1970. The average annual growth rate of urban population

9 Ibid.

¹⁰ Saw Swee Hock, loc. cit.

decreased correspondingly to 3.21 per cent, although this was still more rapid than the rate of rural population growth. In fact, if the definition of urban area is revised to include concentrations of 1,000 or more persons, the level of urbanization can be seen to have declined marginally from 42.20 per cent in 1957 to 41.96 per cent in 1970.

The last intercensal period 1970-1980 witnessed a resurgence in urbanization. The level of urbanization increased from 28.7 per cent in 1970 to 37.2 per cent in 1980. This was primarily attributable to the growth of the construction, manufacturing, utilities and services sectors, which offered an increasing number of job opportunities. Regional development and the establishment of new growth centres also resulted in smaller towns growing more rapidly. The types of skills needed in these areas were less sophisticated, thus encouraging migration from rural areas¹¹. In fact, the increase exceeded the expectations of. the Government, which predicted the level of urbanization to be only 35.0 per cent in 1980.¹²

The pattern of urbanization over the period 1911-1980 can be further examined by considering the tempo of urbanization for any intercensal period (table 54).¹² The tempo of urbanization

Intercensal period	Av	Average annual rate of growth								
	Urban population	Rural population	Total population	Tempo or urbanization						
1911-1921	4.86	1.80	2.17	2.69						
1921-1931	3.38	2.52	2.65	0.73						
1931-1947	3.05	1.33	1.62	1.43						
1947-1957	5.84	1.45	2.45	3.39						
1957-1970	3.21	2.40	2.63	0.58						
1970-1980	4.76	0.89	2.16	2.60						

Table 54. Average annual rate of growth of urban, rural and total population,and tempo of urbanization, Peninsular Malaysia, 1911-1980

Source: Computed from sources for table 53.

⁸ Kernail Singh Sandhu, "Emergency resettlement" in Malaya", Journal of Tropical Geography, 1964, pp. 157-183.

¹¹ Malaysia, Fourth Malaysia Plan 1981-1985 (Kuala Lumpur, Government Printer, 1981).

 $^{^{12}}$ There are several definitions for tempo of urbanization. The measure used here is the annual rate of exponential change in the ratio of urban to total population. This can be shown to be the same as the difference between the annual average rate of exponential growth of urban and of total population.

for the intercensal period 1911-1921 was 2.69 per cent. It then slackened to 1.43 per cent for the period 1931-1947. The first intercensal period after the Second World War, 1947-1957, witnessed a quickening in the tempo of urbanization to 3.39 per cent. This slackened considerably in the next intercensal period 1957-1970, to 0.58 per cent, but picked up again to 2.60 per cent in the last intercensal period 1970-1980 for the reasons noted above.

B. PATTERNS OF URBANIZATION BY STATE, 1947-1980

While the over-all level of urbanization in Peninsular Malaysia increased from 10.7 per cent in 1911 to 37.2 per cent in 1980, with varying tempos for the various intercensal periods, there were considerable variations in both level and tempo of urbanization among the different states of Peninsular Malaysia. The smallest State, Perlis, did not contain an urban area until 1980, when its capital, Kangar, passed the level of 10,000 population. Table 55 sets forth the level and tempo of urbanization in the states of Peninsular Malaysia for intercensal periods 1947-1980.

In 1947, there were only three states, Penang, Selangor and Malacca, with levels of urbanization above 20 per cent. Penang, with 53 per cent of its population in urban areas, was far ahead of the next most urbanized State, Selangor, which had 33 per cent of its population in the two urban centres of Kuala Lumpur and Klang. However by 1957, three other states, Perak, Pahang and Johore, also exceeded the 20 per cent level. Overall, all ten states with urban areas experienced an increase in the level of urbanization during the period 1947-1957.

The largest increase was registered in the State of Pahang, which increased its urban proportion from nil in 1947 to 22.2 per cent in 1957. Pahang is the largest State in Peninsular Malaysia, with extensive areas sparsely populated or under jungle. There was considerable internal redistribution of population largely as a result of the policies adopted during the Malayan Emergency.

Selangor continued to have a high level of urbanization. It registered the second-highest increase in level of urbanization, from 32.7 per cent in 1947 to 43.0 per cent in 1957. Penang maintained its position as the most urbanized State, but its level of urbanization increased by a mere 3.8 percentage points to 56.7 per cent for the period 1947-1957.

The tempo of urbanization of states during the intercensal period 1947-1957 however, provides a substantially different picture of changes in urbanization levels. Table 55 shows that Kelantan experienced the highest tempo of urbanization with 6.53 per cent, followed by Kedah with 4.84 per cent and Trengganu with 4.68 per cent. These three states had the lowest levels of urbanization in 1947 and, because of the method used to measure the tempo of urbanization, had a greater chance of registering a high tempo of urbanization.

During the period 1957-1970, the tempo of urbanization in all the states of Peninsular Malaysia had slowed. Only seven of the ten states with urban areas had increases in the level of urbanization while the other three states, Kedah, Pahang and Penang recorded declines. The decline in two states, Kedah and Pahang, could partly be attributed to the end of the Emergency in 1960, with the consequent return of people to rural areas. Another reason in the case of Pahang was the launching of rural land development schemes that attracted migrants not only from within the State but also from other states. Thus, rural population growth in Pahang far outstripped urban population growth, resulting in a decline in the proportion urban from 22.2 per cent in 1957 to 18.9 per cent in 1970. In the case of Penang, out-migration to other more dynamic urban centres in other states (mainly Selangor) was the main reason for the decline in the level of urbanization of 5.8 points to 50.9 per cent in 1970. Even so, Penang remained the most urbanized state in 1970, although Selangor, with 4.5 per cent urban, had narrowed the gap.

Kelantan continued to have the highest tempo of urbanization at 3.33 per cent, but this was only half of the tempo of urbanization there over the period 1947-1957. One of the main causes of the continued rapid urban growth in Kelantan was the increase in the number of urban centres from two in 1957 to five by 1970.¹³ Trengganu had the next -highest tempo of urbanization at 2.7 per cent. There again, the number of

¹³ Ooi Jin Bee, Peninsular Malaysia (London, Longman, 1976).

State	F	er cent d	istributio	n	Per cent	Per cent urban to total population			Actual url	Actual urban growth		f urbanization (j	per cent)
	1947	1957	1970	1980	1947	1957	1970	1980	1957-1970	1970-1980	1947-1957	1957-1970	1970-1980
Johore	12.2	12.2	13.3	13.7	15.4	21.8	26.3	35.2	133 100	220 861	3.48	1.44	2.91
Kedah	4.9	5.6	4.8	3.8	8.2	13.3	12.7	14.4	27 288	34 779	4.84	-0.36	1.26
Kelantan	2.4	3.0	4.1	5.9	5.1	9.8	15.1	28.0	53 911	137 766	6.53	3.33	6.18
Malacca	5.9	4.2	4.0	2.6	22.8	24.0	25.1	23.4	31 689	2 844	0.51	0.34	-0.70
Negri Sembilan	3.8	3.8	4.1	4.4	13.2	17.8	21.5	32.6	39 614	75 785	2.99	1.45	4.16
Pahang		4.2	3.8	4.9		22.2	19.0	26.1	26 244	105 081		-1.20	3.17
Penang	25.4	19.5	15.6	10.5	52.9	56.7	50.9	47.5	70 557	32 809	0.69	-0.83	-0.69
Perak	17.5	18.2	17.1	13.8	17.1	25.0	27.5	32.2	126 367	130 395	3.80	0.73	1.58
Perlis	_	-	-	0.3		_		8.9	_	12 949	_	_	_
Selangor (including W. Per- sekutuan)	25.0	26.1	28.9	34.5	32.7	43.0	45.0	60.0	297 989	673 691	2.74	0.35	2.88
Trengganu	2.9	3.2	4.3	5.5	11.9	19.0	27.0	42.9	56 705	115 712	4.68	2.70	4.63
Peninsular Malaysia	100.0	100.0	100.0	100.0	18.9	26.6	28.7	37.2	863 464	1 542 672	3.39	0.58	2.59

Table 55. Distribution and growth of urban population by state, Peninsular Malaysia, 1947-1980

Source: Computed from sources for table 53.

urban centres increased from three to five between 1957 and 1970. These two states on the east coast thus managed to maintain high tempos of urbanization, while the figure for Peninsular Malaysia was only 0.58 per cent. Although Selangor experienced the highest actual urban growth (300,000) during the period 1957-1970, it also registered a proportionate increase in its rural population so that the level of urbanization increased by only two percentage points to 45 per cent in 1970. The tempo of urbanization was also low.

During the period 1970-1980, urbanization in Peninsular Malaysia changed appreciably. While in 1947 only three states exceed the 20-level of urbanization, by 1980 slightly more than three decades later, only two states, Perlis and Kedah, continued to have urban populations below 20 per cent of the total.

The tempo of urbanization in all states except Penang and Malacca recorded an increase during the period 1970-1980. In Pahang the negative trend registered during the period 1957-1970 was reversed. This can be attributed mainly to the very rapid growth of its capital, Kuantan, from 43,000 in 1970 to 132,000 in 1980.

It is also interesting to note that Kelantan and Trengganu continued to have the highest tempos of urbanization at 6.2 and 4.6 per cent, respectively. These two east-coast states benefited considerably from government economic policy to develop the less developed states. In the case of Trengganu, off-shore oil exploration contributed further to development. Selangor (including Federal Territory) had overtaken Penang as the most urbanized State, mainly because of very rapid industrial development in the Kelang Valley region. The proportion urban in Selangor increased from 45 per cent in 1970 to 60 per cent in 1980.

In the case of Penang, the decline that began over the period 1957-1970 continued for the period 1970-1980. Levels of urbanization in Penang declined from 50.9 per cent in 1970 to 47.5 per cent in 1980. While out-migration from Penang urban centres to other more dynamic towns like Kuala Lumpur continued, there was also considerable in-migration. This however, was mainly to areas outside the urban centres. In addition, migrating workers live mainly outside urban areas and commute daily to work in factories, some of which may be located in urban areas. This probably explains the decline in levels of urbanization despite fairly rapid industrial development in Penang over the years 1970-1980.

Malacca, for the first time, recorded a decline in the urban proportion, from 25.1 per cent in 1970 to 23.4 per cent in 1980. This was due mainly to the slow pace of economic development in that State. Malacca was the third most urbanized State in 1947, but it had fallen back to ninth place by 1980.

C. PATTERNS OF URBANIZATION BY ETHNIC GROUP, 1947-1980

The society of Peninsular Malaysia is multiethnic. One of the disparities of socio-economic development in Malaysia is the general alignment of ethnic concentration along economic and areal lines. Malays are largely located in the rural areas, while a greater proportion of Chinese and Indians are found in commercial and industrial centres. There are wide disparities in socio-economic conditions between urban and rural areas in terms of educational and job opportunities, social amenities and health facilities.¹⁴ As noted above, the Government is determined to eliminate "the identification of race with vocation as well as location" in order to achieve the objectives of its New Economic Policy.¹⁵ Hence an analysis of the patterns of urbanization by ethnic group assume added importance.

Indeed, thanks to the massive development efforts of the Government, ethnic composition according to socio-economic and areal divisions is fast changing. Table 56 shows the changing ethnic composition of the urban population over the period 1947-1980. Although Malays constituted about 50 per cent of the population in Peninsular Malaysia in 1980, their share of the urban population was below 40 per cent. Nevertheless, the Malay share had increased from 19.0 per cent in 1947. Whereas the increase was only two percentage points during the period 1947-1957, it was more than six percentage points over the period 1957-1970. The Chinese share in urban population dropped from more than 63 per cent in 1947 to

¹⁴ Charles Hirschman and Yeoh Suan-Pow, loc. cit.

¹⁵ Malaysia, Second Malaysia Plan 1971-1975 (Kuala Lumpur, Government Printer, 1971).

Census		Proportion of urban population (per cent)								
Census year 1947 1957 1970 1980	Urban population	Malay	Chinese	Indian	Other					
1947	929 928	19.0	63.1	14.7	3.2					
1957	1 666 969	21.0	62.6	12.8	3.6					
1970	2 530 433	27.6	58.5	12.8	1.1					
1980	4 073 105	37.9	50.3	11.0	0.7					

Table 56. Ethnic composition of urban population, Peninsular Malaysia, 1947-1980

Source: Same as for table 53.

below 60 per cent in 1970, while the Indian share in urban population in 1947 dropped by 2 percentage points to 12.7 in 1970.

This change has become more noticeable since 1970, the beginning of the New Economic Policy aimed at restructuring the society. During the period 1970-1980, the Malay share in urban population increased to 38 per cent, while the Chinese share declined to 50 per cent. Thus, although Chinese continued to predominate in urban areas, Malays steadily increased their urban share, doubling from 19 to 38 per cent over the period 1947-1980. This trend is likely to continue in the future.

The level of urbanization of each of the major ethnic groups increased steadily over the period 1947-1980. Table 57 shows that the proportion of Malays who were urban dwellers more than trebled during this period, the increase being largest during the last ten years. In 1980, 25.2 per cent of Malays resided in urban areas. This figure

is much larger than the 20 per cent forecasted by the Government.¹⁶ The increase in the urban proportion of Chinese was substantial during the period 1947-1957. This could be explained by the fact that the Chinese were most affected by the Emergency, during which large numbers were resettled in the relative security of the urban areas. However, the growth of Chinese urban population slowed considerably with respect to total Chinese population over the period 1957-1970, when it registered an increase of only 2.7 percentage points to reach 47 per cent in 1970. In addition, the tempo of urbanization for all ethnic groups slowed to varying degrees in the 1960s for reasons given above; that for Chinese slowed most and that for the Malays least.

Over the next ten years (1970-1980) however, the tempo of Chinese urbanization picked up again so that by 1980 more than half of all Chinese

¹⁶ Malaysia, *Third Malaysia Plan 1976-1980* (Kuala Lumpur, Government Printer, 1976).

~	Per cer	nt urban to total pop	oulation	Tempo of urbanization ^a				
Census year	Malay	Chinese	Indian	Malay	Chinese	Indian		
1947	7.30	31.10	25.80					
1957	11.21	44.73	30.73	4.30	3.60	1.70		
1970	14.93	47.38	34.68	2,20	0.40	0.90		
1980	25.20	56.12	41.02	5.20	1,70	1.70		

Table 57. Percentage of urban to total population by ethnic group, Peninsular Malaysia, 1947-1980

Source: Same as for table 53.

^a For intercensal periods.

resided in urban areas. The level of urbanization of Indians was moderate and lay between the percentages for Malays and those for Chinese in the four census years since 1947. Thus, although the level of urbanization of Chinese was the highest of all ethnic groups in 1980, the tempo had slowed, and Malays particularly, appeared likely to narrow the gap in the future. This is consistent with the goals of the New Economic Policy to incorporate Malays more fully into the modern urban economy.

Discussions of the undifferentiated aggregate urban population obscure notable differences among ethnic groups. However, if urban centres are classified by population size, several significant features can be identified at the 1957, 1970 and 1980 censuses. Table 58 shows the ethnic composition of urban areas classed by size, and the average annual growth rate of each ethnic group within each size class for the two intercensal periods 1957-1970 and 1970-1980.

While the proportion of Malays in the class of the smallest size (10,000-24,999 persons) almost doubled over the period 1957-1970, this increase was marginal during the period 1970-1980. Malay representation, however, almost doubled during the period 1970-1980 in the class of the largest size (75,000 or more persons). Thus, government efforts to increase Malay urbanization were more noticeable during the period 1970-1980. There were no definite patterns in the other size classes.

Malay representation was affected partly by towns being placed in higher size classes through increases in population. For example, the decline in Malay representation in the 50,000-74,999 size class during the period 1970-1980 was partly attributable to the two east coast state capitals of Kota Bahru and Kuala Trengganu, predominantly populated by Malays, being placed in the 75,000 or more class in 1980. Thus, the 50,000-74,999 class registered negative growth while the largest size class experienced large growth. Over-all, the Malay proportion in each size class varied from 30 to 40 per cent in 1980.

Chinese representation in the largest and the smallest size classes declined steadily from 1957 to 1980, while in the other size classes there were no definite patterns. The decline in the largest size class was significant during the period 1970-1980,

with the result that the Chinese constituted slightly below 50 per cent in cities of 75,000 or more. In fact, the gap between the Chinese and the Malay representations narrowed from nearly 40 percentage points in 1970 to only about 11 percentage points in 1980. However, Chinese urban population in this size class grew at a faster rate during the period 1970-1980 than during the period 1957-1970. A sharp decline was recorded for Chinese representation in the 10,000-24,999 class during the period 1957-1970. This could be partly explained by the fact that during the Emergency. the relocation of the Chinese in rural areas was mainly to towns of this size. Their return to the rural areas after the Emergency caused the sharp decline in their population in the 10,000-24,999 class. The decline in the proportion Chinese and the negative growth in the 25,000-49,999 class during the period 1970-1980 can be partly attributed to the very rapid growth of Taiping and Kuantan, predominantly populated by Chinese, and their consequent placement in the largest size class. While the Chinese population declined only in the 10,000-24,999 class during the period 1957-1970, there were declines in both intermediate size classes (25,000-49,999 and 50,000-74,999) over the period 1970-1980. Over-all in 1980, 50 to 60 per cent of the population in each size class were Chinese.

Indian representation in the two largest size classes declined steadily from 1957 to 1980, while there were no significant changes in the other two size classes. In 1980, Indian representation in each size class varied between roughly 6 and 12 per cent.

The distribution of urban population of each ethnic group, by size of urban area in the three census years 1957, 1970 and 1980 is given in table 59. While the urban Malay population in 1957 was fairly evenly distributed among the four size classes, in 1980 three out of every four urban Malays resided in cities of 75,000 or more persons. This figure is even higher than that for Chinese (73 per cent). The proportion of urban population of each ethnic group in the 10,000-24,999 class was fairly stable over the period 1957-1980. The proportions in the two intermediate size classes declined substantially for all ethnic groups during the same period. The combined proportion in these two intermediate size classes declined from 48 per cent in 1957 to 11 per cent in 1980 for

					1	Proportion o	f total					
Size of urban area		Malay			Chinese		Indian			Other		
	1957	1970	1980	1957	1970	1980	1957	1970	1980	1957	1970	1980
75,000 or more	14.1	21.9	38.2	66.1	61.4	49.4	15.5	15.2	11.6	4.3	1.5	0.8
50,000-74,999	25.9	42.6	36.1	58.6	48.4	57.5	10.5	8.4	6.0	5.0	0.6	0.4
25,000-49,999	33.6	21.2	31.2	52.8	67.0	56.4	10.7	11.4	12.1	2.9	0.4	0.3
10,000-24,999	21.2	38.8	40.6	66.1	51.6	49.2	10.7	9.0	9.3	2.0	0.7	0.9
<u> </u>					Aver	age annual g	rowth rate					
Size of urban area		Malay			Chinese		····	Indian			Other	
	1957-1970	19	70-1980	1957-197	70 1	970-1980	1957-19	970	1970-1980	1957-197	0 1	970-1980
75,000 or more	8.60		12.73	4.63		4.99	5.06		4.46	-2.86		0.81
50,000-74,999	7.55		-6.50	2.24		-3.12	2.00		-8.10	-12.73		-9.56
25,000-49,999	-4.39		4.04	1.00		-1.57	-0.38		0.81	-15.72-		-4.86
10,000-24,999	4.90		3.70	-1.66		2.72	-1.11		3.60	-8.05		6.13

Table 58. Changes in ethnic composition by size of urban centre, Peninsular Malaysia, 1957-1980 (Per cent)

Source: Same as for table 53.

Table 59. Distribution of urban population of each ethnic group by size of urban area, Peninsular Malaysia, 1957-1980

Size of urban centre		1957					197 0				1980				
Size of urban centre	Malay	Chinese	Indian	Other	Total	Malay	Chinese	Indian	Other	Total	Malay	Chinese	Indian	Other	Total
75,000 or more	30.3	47.7	54.6	53.4	45.1	46.4	61.4	69.6	78.8	58.5	75.1	73.0	78.5	79.5	74.5
50,000-74,999	18.5	14.1	12.2	20.5	15.0	24.7	13.3	10.5	8.4	16.0	5.8	7.0	3.3	3.0	6.1
25,000-49,999	29.4	15.4	15.2	14.4	18.3	8.3	12.4	9.6	4.0	10.8	5.6	7.7	7.5	2.3	6.8
10,000-24,999	21.8	22.8	18.0	11.7	21.6	20.6	13.0	10.3	8.8	1 4. 7	13.5	12.3	10.7	15.2	12.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.Ò

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Source: Same as for table 53.

Malays; the decline during the same period was more moderate for Chinese and Indians (14-15 percentage points).

D. URBAN POPULATION CHANGE AND CITY DISTRIBUTION

A comparison of levels of urbanization defining as urban those areas of 10,000 persons or more, gives only a partial picture of the process of urbanization during any period of time. To obtain a better understanding of the urbanization process, it is also necessary to examine the distribution of the urban population in areas of various sizes for a given time period.

Actual changes in urban population by size of urban centre can be variously measured. Fernandez, Hawley and Predaza¹⁷ have presented two methods for measuring this change over the period 1957-1970. These methods were also applied here for the period 1970-1980. In the first method, the universe of towns in each size class was held constant, and growth in urban centres was measured according to the classification of areas at the beginning of the intercensal interval. The results are given in tables 60 and 61.

The second method held the size class constant and allowed urban centres to change from

one class to another over the intercensal periods. The results, as shown in table 62, were somewhat different. Since many larger urban centres moved up the urban hierarchy because of growth, the class of 75,000 or more grew at an exceptional rate, while the other size classes grew slowly or even lost population, as occurred in places of 25,000-49,999 persons. The result was that the proportion of urban population in urban areas of 75,000 or more persons increased from 46 per cent in 1957 to 58 per cent in 1970, and even more rapidly to 74 per cent in 1980. Mean while the proportion in urban areas of 10,000-24,999 persons and 25,000-49,999 persons decreased significantly from a combined 39 per cent in 1957 to under 20 per cent of the urban population in 1980, the decrease being sharper over the period 1957-1970.

The first method resulted in almost identical distribution of urban population by size class for 1957 and 1970. During the period 1970-1980 however, the more rapid growth rate of urban centres in the 50,000-74,999 class contributed to significant increases in the proportion of urban population in this category by 1980. Mean while the sluggish growth of urban centres in the smallest size class caused a corresponding significant decline.

Although the second method has obvious advantages over the first, it can lead to artifically inflated increases in the proportions of urban population in the larger size classes of the urban

Size of urban area	· 1	957	1	Average	
	Urban population	Percentage of urban population	Urban population	Percentage of urban population	annual growth rate 1957-1970
75,000 or more	752 552	46.29	1 082 633	45.98	2.80
50,000-74,999	249 763	15.36	370 570	15.74	3.03
25,000-49,999	304 822	18.75	426 581	18.12	2.59
10,000-24,999	318 498 ^a	19.59	474 690	20.16	3.07
Total	1 625 635	100.00	2 354 474	100.00	2.85

Table 60. Urban population change by constant universe of towns in size class,Peninsular Malaysia, 1957-1970

Source: Adapted from D.Z. Fernandez, A.H. Hawley and S. Predaza, The Population of Malaysia, Research Paper No. 10 (Kuala Lumpur, Department of Statistics, 1976).

^a Excluding Guntong, Pasir Pinji and Temerloh.

¹⁷ D.Z. Fernandez, A.H. Hawley and S. Predaza, *The Population of Malaysia*, Research Paper No. 10 (Kuala Lumpur, Department of Statistics, 1976).

Size of urban area	1	970	1	Average	
	Urban population	Percentage of urban population	Urban population	Percentage of urban population	annual growth rate 1970-1980
75,000 or more	1 480 390	60.29	2 328 395	59.86	4.53
50,000-74,999	405 045	16.49	771 465	19.83	6.44
25,000-49,999	245 975 ^a	10.02	365 204	9.39	3.95
10,000-24,999	324 238 ^b	13.20	424 599	10.92	2.70
Total	2 455 648	100.00	3 889 663	100.00	4.60

Table 61. Urban population change by constant universe of towns in size class,
Peninsular Malaysia, 1970-1980

Source: Same as for table 53.

^a Excluding Jinjang, which was part of Federal Territory in 1980.

^b Excluding Kuala Trengganu Barat and Kuala Trengganu Tengah, which were part of Kuala Trengganu in 1980; Pokok Asam, which was part of Taiping in 1980; and Tumpat, which was no longer an urban centre in 1980.

hierarchy during a given time period. This is because it ignores the annexation of towns by larger cities. A third method is therefore proposed whereby if certain towns were annexed by a larger city during the period 1957-1970, they would be categorized for 1957 according to their 1970 position as part of the larger cities in a larger size class.

For instance, municipal status was conferred on Ipoh in 1962, leading to considerable expansion of its territory. Eight towns which were separately listed in the 1957 census were incorporated as part of the Ipoh municipality in 1970. To eliminate this appearance of rapid growth which resulted merely from reclassification, the population of these eight towns would be added to the 1957 population of Ipoh. Similar adjustment would be made to Kajang, the boundaries of which had also expanded by 1970. During the period 1970-1980. the boundaries of Kuala Lumpur expanded considerably to include the entire Federal Territory, which was regarded as one urban centre in 1980.

Similarly, a number of other urban centres expanded their boundaries through the annexation of gazetted or non-gazetted areas, or both. In the case of urban centres which annexed gazetted areas only, the population of these gazetted areas was incorporated into the population of the urban centres. For urban centres which annexed both gazetted and non-gazetted areas, only the population of the gazetted areas was incorporated into the population of these urban centres, as the population of non-gazetted areas was not known. No adjustment was made to the population of urban centres which annexed non-gazetted areas only. Thus there was some under-estimation of population of these last two types of urban centres. The urban centres which annexed at least one gazetted area for which the population figure was available, are listed in appendix A to this chapter.

The results of this third method are presented in tables 63 and 64. During the period 1957-1970, the proportion of urban population in the largest size class of urban area increased by 11 percentage points (from 47 per cent in 1957 to 58 per cent in 1970), compared with 13 percentage points for the second method. The results for the other urban size classes were similar to those obtained by the second method, with the 25,000-49,999 size class still registering a negative growth rate.¹⁸

Similar results were obtained for the period 1970-1980. The proportion of urban population in the largest size class increased by only 6 percentage points, 10 percentage points less than the

¹⁸ Charles Hirschman, loc. cit.

Table 62. Urban population change by constant definition of areas by size,Peninsular Malaysia, 1957-1980

	19	57	19	70	19	80	Average		
Size of urban area	Urban	Percentage	Urban	Percentage	Urban	Percentage	annuar s rat	e	
	population	population	population	population	population	population	1957-1970	1970-1980	
75,000 or more	752 552	45.78	1 480 390	58.50	3 032 084	74.44	5.20	7.17	
50,000-74,999	249 763	15.19	405 045	16.01	249 628	6.13	3.72	-4.84	
25,000-49,999	304 822	18.54	273 319	10.80	277 765	6.82	-0.84	0.16	
10,000-24,999	359 832	20.49	371 679	14.69	513 628	12.61	0.25	3.23	
Total	1 666 969	100.00	2 530 433	100.00	4 073 105	100.00			

Sources: Same as for table 53; see also source for table 60.

Table 63. Urban population change by constant universe of towns in size class,Peninsular Malaysia, 1957-1970 (taking 1970 urban boundaries in 1957)

Size of urban area	1	1957	1	Average	
	Urban population	Percentage of urban population	Urban population	Percentage of urban population	annual growth rate 1957-1970
75,000 or more	808 010	47.30	1 480 390	58.50	4.66
50,000-74,999	249 763	14.62	405 045	16.01	3.72
25,000-49,999	304 822	17.84	273 319	10.80	-0.84
10,000-24,999	345 660 ^a	20.23	371 679	14.69	0.56
Total	1 708 255	100.00	2 530 433	100.00	

Source: Same as for table 53.

^a Excluding Guntong and Pasir Pinji, which were annexed by Ipoh.

	Peninsular Malaysia, 1970-1980 (taking 1980 urban boundaries in 1970)								
Size of urban area	1	970]	Average					
	Urban population	Percentage of urban population	Urban population	Percentage of urban population	rate 1970-1980				
75,000 or more	1 907 946	68.08	3 032 084	74.44	4.63				
50,000-74,999	353 307	12.60	249 628	6.13	-3.47				
25,000-49,999	202 617	7.22	277 765	6.82	3.15				
10,000-24,999	341 047 ^a	12.16	513 628	12.61	4.09				
Total	2 804 917	100.00	4 073 105	100.00	3.73				

Table 64. Urban population change by constant definition and size class,Peninsular Malaysia, 1970-1980 (taking 1980 urban boundaries in 1970)

Source: Same as for table 53.

^a Excluding Kuala Trengganu Tengah and Kuala Trengganu Barat, which were part of Kuala Trengganu in 1980; and Pokok Asam, which was part of Taiping in 1980.

increase from the second method. The proportion of urban population in the two intermediate size classes registered a decrease, with the 50,000-74,999 class, in fact, recording a decrease in population. The smallest size class registered a marginal increase in proportion of urban population instead of a small decline by the second method. These results suggest that Malaysia, in common with other countries in the south-east Asian region, is marked by dynamic expansion of larger cities and nil or negative growth in smaller towns. It is useful to examine the system of towns and cities that made up the urban hierarchy. An urban hierarchy characterized by rank-size regularities is considered to be conducive to development. Any deviation is viewed unfavourably as it indicates over-concentration.¹⁹ The evaluation of city distribution using the rank-size

¹⁹ J.L. Anthony Greca, "Urbanization: a world wide perspective" in Schwirian and others, eds., *Contemporary Topics in Urban* Sociology (New Jersey, General Learning Press, 1977); and

Berry and Kasarda, Contemporary Urban Ecology (New York, MacMillan Publishing, 1977).

rule is based on the urban centres of Peninsular Malaysia for 1957, 1970 and 1980 given in appendix B to this chapter. (For a discussion of the construction of the "Z" value of the rank-size rule, see Arriaga.²⁰ Estimated Z values are 0.913, 0.943 and 1.084 for the respective years. During the period 1957-1970 there seems to have been no real difference in the concentration of population in all urban centres. Since 1970 however, this has changed somewhat as is indicated by the higher Z value for 1980.

Nevertheless, the Z values for these three census years show that there appeared to be no state of primacy (values close to one). In fact, the rank-size distributions for 1957, 1970 and 1980 were about ideal. Using all urban centres is not however, the most realistic method of assessing the urban system. Values for Z when recalculated classifying as urban, centres of 20,000 or more persons are 0.880, 0.874 and 1.036 for 1957. 1970 and 1980, respectively. Although these values are lower than the corresponding values obtained by using all urban centres, they are not significantly different. Therefore, the over-all picture is one of a well-balanced urban hierarchy with no marked concentrations in the largest cities.

The Gini concentration ratio may also be used to further assess the city distribution.²¹ When applied to all urban centres in 1957, 1970 and 1980 given in appendix B, the respective values are 0.523, 0.576 and 0.644. Corresponding values obtained by redefining urban centres as those of 20,000 persons or more are 0.451, 0.475 and 0.556. Both sets of values confirm the earlier findings from the use of the rank-size rule that the urban system was well-balanced and therefore conducive to development.

To examine the situation further, estimates using the primacy index to measure the urbanization process were computed.² ² Using only the four largest urban centres in the measure, the results were 0.749 for 1975, 0.691 for 1970 and 1.171 for 1980. When the eleven largest urban centres were considered in the measure, the values were 0.801, 0.742 and 0.940 for the same years, respectively. While the estimates for 1957 and 1970 did not indicate any primacy problems or any significant change in the concentration of urban population in the larger cities, the period since 1970 showed trends toward the development of primacy. This is due to the rapid growth of Kuala Lumpur, which underwent considerable inmigration from other parts of the country and also sizeable expansion of its territory.

E. COMPONENTS OF URBAN POPULATION GROWTH

Allied to the notion of rapid urbanization has been the belief that, in addition to substantial natural increase, urban centres have been growing largely as a consequence of rural-to-urban migration. This section, therefore, examines the relative importance of the various components of urban growth and, in particular, the contribution of net migration to urban growth in Peninsular Malaysia.

There are two dimensions that need to be considered in examining change in the urban population during a given period. These are the localities within which change may occur and the population growth or demographic components which contribute to the urban population change within these localities. The types of localities that must be considered are: (a) localities which were urban during the entire period under observation; (b) localities which changed their status from urban to rural or vice versa; and (c) localities which were annexed by an existing urban area. The demographic components are natural change, migration and the reclassification of population from rural to urban.^{2 3}

The inadequacy of Malaysian census information precludes the use of the survival ratio method for estimating the components of urban population growth. Fernandez, Hawley and Predaza^{2 4} used the natural growth-rate method of estimating the magnitudes of the three demographic components of urban growth during the periods 1947-1957 and 1957-1970 by assuming

²⁰ E. Arriaga "Selected measures of urbanization" in S. Goldstein and D.F. Sly, eds., *The Measurement of Urbanization and Projection of Urban Population* (Liege, Ordina Editions, 1975).

²¹ Ibid.

²² *Ibid;* and

Kingsley Davis, The Urbanization of Population in Cities (New York, Afred A. Knopf, 1969).

²³ E. Arriaga, loc. cit.

D.Z. Fernandez, A.H. Hawley and S. Predaza, op. cit.

that the urban population of each state at the beginning of the intercensal period increased at the same rate as the population of Peninsular Malaysia. The expected increase in urban population could therefore be obtained for each state. The difference between this expected increase and the actual increase in each state was attributed to migration. The magnitude of the reclassification component would then be the population of urban centres at the end of an intercensal period which were not classified as urban at the beginning of the intercensal period.

Estimates by Fernandez, Hawley and Predaza of the three sources of urban growth are presented in table 65 for the intercensal periods 1947-1957 and 1957-1970. During the period 1947-1957, natural increase, migration and reclassification contributed almost equally to urban growth in Peninsular Malaysia. However, there were large variations among the states. Natural increase explained almost entirely the urban growth in Malacca and it also dominated urban growth in Penang. Trengganu was the only State which lost urban population through migration. Selangor was the only State in which migration made a major contribution to urban growth, accounting for more than 50 per cent of the increase.

During the period 1957-1970, migration played a less dominant role. While natural increase was responsible for three fifths of all urban growth, migration accounted for less than one fifth, and reclassification for slightly over one fifth. The growing role of natural increase is to be expected because, as the base population of urban centres expands, the contribution of natural increase becomes more important.

In three states, Kedah, Malacca and Penang, urban areas lost population through migration, the most seriously affected State being Penang. Although these losses were more than compensated for by either natural increase or reclassification so that all states registered an increase in urban population, this migration helps to explain

		1947-1957				1957-1970				
State	Actual	Distribution of increase			Actual	Distribution of increase				
	urban population increase	Total	Natural increase	Migra- tion	Reclassi- fication	population increase	Total	Natural increase	Migra- tion	Reclassi- fication
Johore	89 361	100.0	44.4	35.0	20.6	133 100	100.0	52.2	29.6	18.2
Kedah	47 837	100.0	26.3	36.9	36.8	27 288	100.0	115.0	-15.0	_
Kelantan	26 586	100.0	23.6	34.1	42.3	53 911	100.0	31.3	6.1	62.6
Malacca	15 341	100.0	97.9	2.1		31 689	100.0	72.1	- 17.5	45.4
Negri Sembilan	28 841	100.0	33.7	24.6	41.7	39 614	100.0	52.9	21.0	26.1
Pahang	57 242	100.0			100.0	38 540	100.0	48.6	22.1	29.3
Penang	88 293	100.0	73.7	26.3	_	70 557	100.0	150.4	-67.8	17.4
Perak	142 631	100.0	31.4	19.6	49.0	226 367	100.0	79.0	12.5	8.5
Perlis	_	_	_	_	_	_	_	_	_	-
Selangor	214 396	100.0	28.4	51.4	20.2	298 709	100.0	47.7	41.0	11.3
Trengganu	14 957	100.0	48.0	-31.7	83.7	67 508	100.0	20.3	22.5	57.2
Total	725 485	100.0	34.9	31.7	33.4	887 283	100.0	60.6	18.1	21.3

Table 65.	Components of urban population growth, Peninsular Malaysia	,
	1947-1957 and 1957-1970	

Source: D.Z. Fernandez, A.H. Hawley and S. Predaza, *The Population of Malaysia*, Research Paper No. 10 (Kuala Lumpur, Department of Statistics, 1976), table 3.10.

the low or negative tempo of urbanization in these three states. In Selangor, migration was still an important component of urban growth, accounting for 41 per cent of the urban increase. The other State in which migration was a fairly important component of urban growth was Johore, reflecting the establishment of dynamic growth centres there.

The method of Fernandez, Hawley and Predaza is here applied to obtain estimates of the three components of urban growth for the intercensal period 1970-1980, though some adjustments were necessary. The 1970 population of gazetted areas annexed by larger urban centres during the period 1970-1980 was first obtained. The estimated 1980 population of these annexed gazetted areas was obtained by assuming the same rate of growth as for the total population of Peninsular Malaysia. This estimated 1980 population was combined with the population of towns which crossed the urban population threshold during the period 1970-1980 to provide the reclassification component of urban growth. Hence, the definition of reclassification employed here for the period 1970-1980 differs from that

employed by Fernandez, Hawley and Predaza for the two earlier intercensal periods. This definition would, therefore, yield a larger percentage of urban growth due to reclassification if larger urban centres expanded their boundaries through the annexation of surrounding areas during the intercensal period.

The results of the modified method of Fernandez, Hawley and Predaza for the period 1970-1980 are presented in table 66. During the period 1970-1980, migration regained its importance. While natural increase continued to be the main source of urban growth in Peninsular Malaysia, accounting for almost 40 per cent of urban increase, net migration contributed 30 per cent to that total. Reclassification regained its significance and was responsible for 30 per cent of urban growth.

The same three states, Kedah, Malacca and Penang, that lost urban population through migration during the period 1957-1970, continued to do so, the most seriously affected State this time being Malacca. However, the losses were more than compensated for by natural increase and, to a

_	Actual urban		Distribution of increase					
State	population increase	Total	Natural increase	Migration	Reclassification			
Johore	220 861	100.0	36.9	31.9	31.3			
Kedah	34 779	100.0	84.1	-24.1	40.0			
Kelantan	137 766	100.0	16.3	70.8	12.9			
Malacca	2 844	100.0	865.4	-765.4	_			
Negri Sembilan	75 785	100.0	33.2	35.8	31.0			
Pahang	105 081	100.0	22.1	57.0	20.9			
Penang	32 809	100.0	291.8	-263.1	71.3			
Perak	129 664	100.0	80.3	-2.5	22.2			
Perlis	12 949	100.0	_	_	100.0			
Selangor	468 001	100.0	26.4	38.1	35.5			
Trengganu	115 712	100.0	22.9	57.8	19.3			
Peninsular Malaysia	1 336 251	100.0	39.6	29.7	30.7			

Table 66. Components of urban population growth, Peninsular Malaysia, 1970-1980

Source: Same as for table 53. Calculated based on methods in D.Z. Fernandez, A.H. Hawley and S. Predaza, The Population of Malaysia, Research Paper No. 10 (Kuala Lumpur, Department of Statistics, 1976).

lesser extent, by reclassification, so that these three states still managed to register an increase in urban population. All other states except Perlis however, recorded much higher urban population increases.

In three states, Kelantan, Pahang and Trengganu, migration played a major role in urban growth compared to the period 1957-1970, accounting for more than half of the urban increase in each state. These three states were the targets of the government development strategy to create and develop new growth centres which would attract migrants from surrounding areas.

Although migration was not as important a component of urban growth in Selangor as in the other three states, it still accounted for 38 per cent of urban increase. In fact, in terms of absolute urban population increase, migration was more important in Selangor than in any other state. Apparently Selangor continued to be a target of migration because of the rapid industrial development in the Klang Valley region. In Johore, migration to dynamic growth centres continued to be an important component of urban growth.

The main deficiency of the method applied by Fernandez, Hawley and Predaza is that their migration estimates apply only to places classified as urban at the beginning of the intercensal period. Although migration was a factor that contributed to some places attaining urban status within the intercensal period, the contribution of the population of these places to the total urban growth at the end of the intercensal period was attributed completely to reclassification. It is likely that there was considerable migration to these areas.

F. SUMMARY AND CONCLUSIONS

The pace of urbanization in Peninsular Malaysia increased during the period 1970-1980 after a sluggish phase over 1957-1970. Furthermore, the level of urbanization by 1980 was still modest, although it was higher than in most other south-east Asian countries. Clearly, the actual level of urbanization is dependent not only on the socio-economic development of the country but also on what size of population concentration is adopted as the threshold for classification as an urban area. On a whole, levels and tempos of urbanization were unevenly distributed in Peninsular Malaysia. There were considerable variations among states and also among ethnic groups.

The trends and patterns of urbanization in Peninsular Malaysia, as reflected by statistical changes over the years, were the results of a combination of historical and economic forces. The colonial production structure left a legacy of imbalances in development between certain regions. Indeed, Malaysia followed the colonial pattern of urbanization whereby port centres were developed for trade and linked to their immediate hinterlands for the exploitation of natural resources. A series of small urban centres in the central and northern parts of the western coastal region of the peninsula were also developed as service centres for the working of these resources. These together with the ports were linked by railways and later by roads, to produce an integrated system of settlements. This system had two major nodes, one in the northern and one in the southern part of the peninsular, Penang and Singapore. This reflected the concentration of immigrants and of the colonial economy.

The urban centres in the central region and the east coast of Peninsular Malaysia were further developed after independence. This development intensified in the 1970s. The central region witnessed rapid development as a result of the concentration of administrative and economic activity around the capital, Kuala Lumpur. The east coast regions were the targets of government development strategy, especially in the 1970s after the formulation of the New Economic Policy. Patterns of development were also affected by the secession of Singapore.

Starting from multi-node, balanced urban hierarchy, Peninsular Malaysia is slowly moving towards population concentration in a primate city. Furthermore, larger urban centres are developing more rapidly than smaller urban centres or intermediate towns. These tendencies towards centralization accelerated in the 1970s, resulting in a need to encourage decentralization of activity through careful planning and proper allocation of resources.

Appendix A

1980	URBAN	CENTRES	AND GA	ZETTED	AREAS	ANNEXED	DURING
	THE	E PERIOD	1970-1980	, PENIN	SULAR	MALAYSIA	

Urban centre	Annexed gazetted areas
Johore Bahru	Kangkar Teberau, Pandan
Mersing	Mersing Kecil
Segamat	Bukit Siput, Pekan Jabi
Kota Bahru	Kubang Kerian
Kuala Kerai	Guchil
Seremban	Mambau, Rahang, Rasah, Paroi, Sikamat
Kuantan	Beserah, Gambang, Tanjong Lumpur
Taiping	Aulong, Changkat Jering, Kampong Pinang, Pokok Asam, Port Weld, Simpang
Kuala Lumpur	Rest of the Federal Territory
Kelang	Kapar, Meru
Petaling Jaya	Sungei Way-Subang, Sungei Way, parts of Sungei Penchala
Kuala Trengganu	All Local Councils in Kuala Trengganu district: Kuala Trengganu Tengah, Batu Enam, Batu Rakit and Mengabang Telipot, Seberang Takir, Tepoh, Binjai Rendah, Bukit Payong, Chendering, Wakaf Tapai, Kuala Trengganu Barat (Manir)

Source: Department of Statistics, Malaysia.

Appendix B

POPULATION OF URBAN CENTRES, PENINSULAR MALAYSIA, 1957-1980

1957			1970				
	Urban centre	Population	Urban centre	Population			
1.	Kuala Lumpur	326 990	6. Petaling Jaya	93 447			
2.	Georgetown	234 903	7. Malacca	87 160			
3.	Ipoh	125 770	8. Seremban	80 921			
4.	Klang	75 649	9. Alor Star	66 260			
5.	Johore Bahru	74 909	10. Muar	61 218			
6.	Malacca	69 848	11. Butterworth	61 187			
7.	Alor Star	52915	12. Kota Bahru	55 124			
8.	Seremban	52 091	13. Taiping	54 645			
9.	Taiping	48 206	14. Kuala Trengganu	53 320			
10.	Butterworth	42 504	15. Batu Pahat	53 291			
11.	Batu Pahat	39 294	16. Telok Anson	44 524			
12.	Muar	39 046	17. Kuantan	43 358			
13.	Kota Bahru	38 103	18. Kluang	43 272			
14.	Telok Anson	37 042	19. Sungai Patani	35 959			
15.	Kluang	31 181	20. Jinjang	27 334			
16.	Kuala Trengganu	29 446	21. Bukit Mertajam	26 631			
17.	Bukit Mertajam	24 663	22. Kampar	26 591			
18.	Kampar	24 602	23. Ayer Itam	25 640			
19.	Kuantan	23 034	24. Bentong	22 683			
20.	Sungai Petani	22 916	25. Kajang	21 950			
21.	Ayer Itam	22 369	26. Sungai Siput Utara	21 383			
22.	Bentong	18 845	27. Kulim	18 505			
23.	Segamat	18 445	28. Raub	18 433			
24.	Kulim	17 605	29. / Segamat	17 796			
25.	Jinjang	16 685	30. Dungun	17 560			
26.	Petaling Jaya	16 575	31. Kuala Kangsar	15 310			
27.	Raub	15 363	32. K. Trengganu Barat	14 487			
28.	Sungai Siput	15 337	33. Pangkal Kalong	14 426			
29.	Kuala Kangsar	15 302	34. Bukit Baru	14 377			
30.	Guntung	15 093	35. Serdang Baru	13 910			
31.	Pasir Pinji	13 945	36. Chukai	12 514			
32.	Dungun	12 515	37. Kuala Pilah	12 508			
33.	Temerloh	12 296	38. Tangkak	12 328			
34.	Kuala Pilah	12 024	39. Tanjong Tokong	12 291			
35.	Pangkat Kalong	11 248	40. Kulai	11 841			
36.	Chukai	10 803	41. Peringkat	11 806			
37.	Batu Gajah	10 143	42. K. Trengganu Tengah	11 588			
38.	Serdang Baru	10 024	43. Mentakab	11 308			
	1970		44. Pasir Mas	11 233			
1.	Kuala Lumpur	451 810	45. Ampang	11 084			
2.	Georgetown	269 247	46. Pokok Asam	10 693			
3.	Ipoh	247 969	47. Batu Gajah	10 692			
4.	Johore Bahru	136 290	48. Tumpat	10 673			
5.	Klang	113 607	49. Port Dickson	10 300			

1980			1980				
	Urban centre	Population		Urban centre	Population		
1.	Kuala Lumpur	919 610	30.	Bentong	22 921		
2.	Ipoh	293 849	31.	Raub	22 907		
3.	Georgetown	248 241	32.	Pontian Kecil	21 789		
4.	Johore Bahru	246 395	33.	Pangkal Kalong	21 628		
5.	Petaling Jaya	207 805	34.	Shah Alam	19 041		
6.	Kelang	192.080	35.	Bukit Baru	16 887		
7.	Kuala Trengganu	180 296	36.	Serdang Baru	15 981		
8.	Kota Baru	167 872	37.	Jumaah Bandaran Kemaman	15 962		
9.	Taiping	146 002	38.	Kuala Kangsar	14 539		
10.	Seremban	132 911	39.	Tanjong Tokong	13 964		
11.	Kuantan	131 547	40.	Jitra	13 908		
12.	Melaka	87 494	41.	Mersing	13 888		
13.	Butterworth	77 982	42.	Peringat	13 808		
14.	Alor Star	69 435	43.	Pasir Mas	13 402		
15.	Muar Selatan	65 151	44.	Mentakab	13 305		
16.	Batu Pahat	64 727	45.	Tangkak	13 251		
17.	Keluang	50 315	46.	Kota Tinggi	13 056		
18.	Telok Intan	49 148	47.	Ampang	12 987		
19.	Sg. Patani	45 343	48.	Kangar	12 949		
20.	Ayer Itam	35 550	49.	Gelugor	12 796		
21.	Segamat	34 008	50.	Kuala Krai	12 607		
22.	Kajang/Sg. Chua	29 301	51.	Kuala Pilah	11 954		
23.	Dungun	28 923	52.	Kadok	11 711		
24.	B. Mertajam	28 675	53.	Batu Gajah	10 638		
25.	Kulim	26 817	54.	Labis	10 629		
26. [`]	Kampar	24 626	55.	Tanjung Bunga	10 597		
27.	P. Dickson	24 389	56.	Bahau	10 260		
28.	Kulai	23 627	57.	Kuala Lipis	10 183		
29.	Sg. Siput Utara	23 400	58.	Kuala Kubu Bahru	10 038		

Source: Department of Statistics.

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V. TRENDS AND DIFFERENTIALS IN FERTILITY*

INTRODUCTION

Fertility levels and trends reflect the potential for population growth in the country. In Malaysia, where levels of mortality are already low, the fertility component becomes a tool in demographic analysis and in population planning.

Fertility data for Malaysia are derived from the vital registration, censuses and surveys. Birth registration statistics in Peninsular Malaysia have been evaluated to be about 96 per cent complete in recent years¹. Other estimates of completeness of birth registration reported 92-98 per cent for the years 1957-1970. Registration data, however, are less complete in the case of Sabah and Sarawak. This chapter will thus confine itself for the most part to Peninsular Malaysia, although reference will be made to Sabah and Sarawak where applicable.

Fertility levels in Malaysia were still high in 1970. Data for the 1940s and 1950s show an increase in fertility rates before beginning a decline, although this may to some extent have been accounted for by an improvement in registration coverage. Over-all fertility did however, show a definite decline, especially in the late 1950s, in the 1960s and 1970s (See chapters VII and XII on family planning and socio-cultural aspects of growth, respectively).

A. CRUDE BIRTH RATES

In 1980, the crude birth rate for Peninsular Malaysia was 30.3 per 1,000 population. In 1960, it was registered at 40.9 per 1,000, while in 1970 the rate was 32.5 per 1,000. Thus the rate declined by about 26 per cent over the period 1960-1980. Figure 3 shows the significant decline in the crude birth rate over the period 1960-1980.

For Sabah (figure 4), the crude birth rate was 36.1 per 1,000 in 1960. This declined to 35.5 per 1,000 in 1980. Hence the rate declined by only 0.6 per cent over the period 1960-1980. In 1960, the crude birth rate in Sarawak was 26.4 per 1,000 (table 67). This increased to 30.4 per 1,000 in 1965 and 30.8 per 1,000 in 1970. This increase in crude birth rate could be due to improvement in vital registration coverage rather



Figure 3. Crude birth rate by ethnic group, Peninsular Malaysia, 1960-1980

Sources: Malaysia, Revised Inter-Censal Population Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974). Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

^{*} Contributed by Normah Aris, Department of Statistics.

¹ Malaysia, Vital Statistics for Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1974).

Figure 4. Crude birth rate by ethnic group, Sabah, 1960-1980



Sources: Malaysia, Revised Inter-Censal Population Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974). Malaysia, Vital Statistics, Sabah (Kota Kinabalu, Department of Statistics, various years).

than to a rise in fertility. The crude birth rate declined to 29.4 per 1,000 in 1980.

B. GROSS AND NET REPRODUCTION RATES

Crude birth rates may be influenced by the sex and age structure of the population. The gross reproduction rate provides a more satisfactory measure, as it is not as susceptible to this shortcoming. Table 68 presents the gross reproduction rates and net reproduction rates for the years 1957, 1970, 1975 and 1980. The gross reproduction rate stood at 2.44 in 1970, while the net reproduction rate was 2.23. By 1975, the gross reproduction rate had declined slightly to 2.08, while the net reproduction rate decreased to 1.94. By 1980, the gross reproduction rate had decreased to 1.9.

C. CHILD-WOMAN RATIOS

The child-woman ratio is a census-derived measure of fertility which shows the number of children below age 5 per 1,000 women aged 15-49 years. To obtain a census approximation of the general fertility rate, the child-woman ratio is divided by 5.

The child-woman ratio, if calculated directly from the census age distribution, under-estimates fertility levels. Adjustments need to be made for the mortality of children and women, and for under-enumeration. However, due to the un-

Table	67.	Crude birth rate by ethnic group, Sarawak, 1960-1980
		(Per 1,000 population)

					Other			
Year	Malay	Melanau	Iban	Bidayuh	indigenous	Chinese	Other	Total
1960	34.2	17.5	10.7	36.7		38.1	23.1	26.4
1965	37.9	29.2	14.4	42.0		40.5	24.9	30.4
1970	42.2	26.5	16.3	43.2		38.0	27.4	31.2
1975	37.7	31.0	20.8	36.0	29.0	32.5	27.8	30.0
1980	35.2	30.2	21.5	32.1	25.6	30.2	19.8	28.4

Sources: Malaysia, Revised Inter-Censal Population Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974).

Malaysia, Vital Statistics, Sarawak (Kuching, Department of Statistics, various years).

Note: Prior to 1971, figures for "other indigenous" were included in "other".

Year	Gross reproduction rate				Net reproduction rate				
	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total	
1957	3.0	3.6	3.9		2.3	3.2	3,3	•••	
1970	2.5	2.3	2.4	2.4	2.3	2.2	2.2	2.2	
1975	2.3	1.8	2.0	2.1	2.2	1.7	1.8	1.9	
1980	2.2	1.5	1.6	1.9		• • •		•••	

Table 68. Gross and net reproduction rates by ethnic group, Peninsular Malaysia, 1957-1980

Sources: H. Fell, Population Census, Federation of Malaya, Report No. 14 (Kuala Lumpur, 1957).

Malaysia, Vital Statistics, Peninsular Malaysia (various years).

Notes. For 1980, births to mothers under 15 have been included in the age-group 15-19, and births to mothers above 50 have been included in age group 45-49. Births to mothers whose ages were not stated have not been included.

availability of an estimate of under-enumeration for Sabah and Sarawak, and limitations of mortality data for these two states, no adjustments were made in calculating the child-woman ratios presented in table 69.

It can be seen from this table that the childwoman ratio for Peninsular Malaysia in 1970 was 694.7 per 1,000 women. This ratio has decreased from 800.4 per 1,000 women in 1957. The overall ratio for Malaysia was 709.1 in 1970 and 595.1. in 1980 (table 70). The higher rate compared to that for Peninsular Malaysia is accounted for by the higher levels of fertility for Sabah and Sarawak, according to census data.

The estimated general fertility rate (GFR) for Peninsular Malaysia was 138.9 per 1,000 women in 1970 and 106.4 per 1,000 women in 1980. The corresponding rates for Sabah and Sarawak respectively were 168.2 and 152.1 per 1,000 women in 1970 and 136.5 and 114.1 per 1,000 woman in 1980. Levels of fertility for these two states in 1970, though registration data is of questionable quality, were still much higher than those for Peninsular Malaysia.

The general fertility rate for Peninsular Malaysia in 1970, based on vital registration data was 149.9 per 1,000 women, a difference of about 7 per cent from the rate estimated using the child-woman ratio.

D. TOTAL FERTILITY RATES

Another measure of fertility, that is the total fertility rate (TFR), also shows high levels of fertility in the country.

The total fertility rate for Peninsular Malaysia in 1982 was high, at 3,846 per 1,000 women aged 15-49. The rates for the years 1957 to 1982 are shown in table 71.

TFR had declined from 6,660 per 1,000 in 1957, that is, by about 26 per cent to 4,865 per 1,000 1970. In the twelve-year period from 1970 to 1982, the total fertility rate declined by 31.6 per cent, from 4,865 per 1,000 to 3,846 per 1,000. (For more details see chapters VII and XII.)

The age-specific fertility rates in table 71 show that the decline in fertility over 1957-1982 was most significant for the age-group 15-19. There were declines however, in fertility for all age groups. Peak fertility was around ages 25-29 in 1970 and 1982.

Table	69.	Chilo	l-woman	ratio	and	esti	mate	ed gen-
		eral	fertility	rate	(GF)	R)	by	ethnic
		grou	p, Malays	ia, 19	70			

Fable	70.	Child-w	oman	ratio	and	estimated
		general	fertility	rate	(GFR),	Malaysia,
		1980				

Ethnic group	Child-woman ratio ²	Estimated GFR ^b
Malaysia	709.1	141.8
Peninsular Malaysia		
Malay	729.9	146.0
Chinese	642.9	128.6
Indian	700.6	140.1
Total	694.7	138.9
Sabah		
Kadazan	868.1	173.6
Murut	807.8	161.6
Bajau	825.5	165.1
Other indigenous	888.2	177.6
Malay	923.0	184.6
Chinese	552.7	110.5
Total	840.8	168.2
Sarawak		
Malay	804.4	160.9
Melanau	685.7	137.1
Iban	744.4	148.9
Bidayuh	913.3	182.7
Other indigenous	865.6	173.1
Chinese	705.1	141.0
Total	760.4	152.1

Ethnic group	Child-woman ratio ^a	Estimated GFR ^b
Malaysia	595.1	119.0
Peninsular Malaysia		
Malay	579.0	115.8
Chinese	466.8	93.8
Indian	493.3	98.7
Total	532.2	106.4
Sabah		
Pribumi	726.7	145.3
Chinese	479,7	95.9
Total	682.4	136.5
Sarawak		
Malay	649,5	129:9
Melanau	569.2	113.8
Iban	532.7	106.5
Bidayuh	642.4	128.5
Other indigenous	664.0	132.8
Chinese	522.3	104.5
Total	570.7	114.1

Sources: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia, 1980, State Population Report, Sabah (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia, 1980, State Population Report, Sarawak, (Kuala Lumpur, Department of Statistics, 1983).

- ^a Children aged below five to women 1549.
- b Child-woman ratio divided by 5.

Source: Population census 1970.

^a Children aged below 5 to women 15-49.

^b Child-woman ratio divided by 5.

Year		Age group of women (age-specific fertility rate)												
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	(15-49)						
1957	123	329	347	272	182	79	21	6 660						
1960	125	278	323	257	154	85	19	6 205						
1965	83	265	292	241	157	65	21	5 620						
1970	54	226	265	219	140	56	13	4 865						
1975	46	186	238	183	123	46	7	4 145						
1982	31	170	231	181	122	40	5	3 846						

Table 71. Age-specific fertility rates and total fertility rates, Peninsular Malaysia, 1957-1982 (Per 1,000 women)

Sources: Noor Laily Binti Dato' Abu Baker and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1984), p. 32.

Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1982).

VI. TRENDS AND DIFFERENTIALS IN MORTALITY*

INTRODUCTION

Trends in mortality give an indication of changes in the general level of health in a particular country. Mortality levels are generally measured by crude death rates, infant mortality rates and life expectancy.

Mortality data for Malaysia are collected through a system of registration in existence since the beginning of the twentieth century in some states of Peninsular Malaysia (then called the Federated Malay States and the Straits Settlements). However, vital registration data for the whole of Peninsular Malaysia have improved only in the last three decades or so, that it from the census of 1947. By the late 1950s, registration data in Peninsular Malaysia had attained a high degree of completeness. From 1947 to 1957, birth registration data have been reported to be about 90 per cent complete¹ and by 1967/68, this had increased to 97 per cent.² In 1974, completeness of registration of deaths was estimated at 93 per cent.

This, however, was not the case for Sabah and Sarawak. There under-registration has been estimated at roughly 30 and 40 per cent, respectively, even in the late 1960s. Therefore, more attention will be given here to presenting mortality in Peninsular Malaysia, rather than in Malaysia as a whole.

Measures of mortality used in the official statistics of Malaysia are crude death rates, infant (under one year) and toddler (1-4 years) mortality rates, age-specific mortality rates and life expectancies.

A. LEVELS AND TRENDS IN MORTALITY

The 1970s saw a low level of mortality in Malaysia. As early as the 1930s and 1940s, there was rapid population growth in Malaysia owing to the decline in death rates and natural increase rather than to immigration.

1. Crude death rates (CDR)

The earliest mortality statistic available from the vital registration system was the crude death rate for the Straits Settlements, at a high of 46.3 per 1,000 population in 1911. During the 1920s, the crude death rate for the Federated Malay States was around 30 per $1,000.^3$

Figure 5 presents crude death rates for Peninsular Malaysia for the years 1960-1980. These rates are based on the mid-year population which has been adjusted for under-enumeration. Figure 5 shows that mortality declined steadily from 1960 to 1980. For the total population, the rates decreased from 9.5 per 1,000 in 1960 to 5.2 per 1,000 in 1980. This constituted a decrease of about 45 per cent over the whole period.

Although it is clear that mortality has also declined in Sabah and Sarawak, the precise rate of decrease cannot be ascertained. Crude death rates for the period 1960 to 1980 for the two states, presented in table 72, show that the highest rate for Sabah was 8.3 per 1,000 in 1960, while for Sarawak the highest rate was at 5.8 per 1,000, recorded for the same year.

2. Infant, toddler and neo-natal mortality rates

For the years prior to 1957, there was a fluctuating trend in infant death rates, although over-all the data show a general decline (figure 6). In 1950, the infant death rate registered 102 per 1,000 live births, and it had fallen below 80 per 1,000 by 1957. However, the decline in infant

Contributed by Normah Aris, Department of Statistics.

¹ Saw Swee Hock, "A note on under-registration of births in Malaya during the inter-censal period 1947-57", *Population Studies*, vol. 18 (1964).

² United Nations, Report of the Seminar on Civil Registration and Vital Statistics for Asia and the Far East, Statistical Paper Series M, No. 50 (1971).

³ J.A. Palmore and others, *The Demographic Situation in Malaysia*, Reprint Series No. 70 (Honolulu, East-West Population Institute, 1975).

Figure 5. Crude death rate by ethnic group, Peninsular Malaysia, 1960-1980



Sources: Malaysia, Revised Inter-Censal Population Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974).

Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).Note:Mid-year population adjusted for under-enumeration used.

death rate was more pronounced over the years 1957-1970, from 76 to 41 per 1,000. By 1980 the rates had begun to decline more gradually to 24 per 1,000, a drop of about 41 per cent since 1970.

Figures 7 and 8 show the toddler mortality rates and neo-natal mortality rates, respectively, for the years 1960 to 1980. Toddler mortality rates registered a gradual decline for the period 1960-1980, falling from 8 per 1,000 in 1960 to 2 per 1,000 in 1980.

Rates of neo-natal mortality (deaths within the first week of life per 1,000 live births) similarly declined during the period 1960-1980, though not as significantly. The rate declined by 50 per cent, from 30 to 15 per 1,000, over the interval 1960-1980.

3. Maternal mortality rates

Another measure of mortality, the maternal mortality rate, registered 10.8 per 1,000 live births in 1947. This declined by over 70 per cent to reach 2.5 per 1,000 in 1957. In 1964, the maternal mortality rate was 2.1 per 1,000. It had declined to 1.5 per 1,000 by 1970, and further to 0.83 per 1,000 by 1975. By 1980, the maternal mortality rate had fallen to 0.63. In 1981, the rate was 0.59, a decline of over 6 per cent per year.

Table 72. Crude death rate and infant mortality rate	e, Sabah and Sarawak, Malaysia, 1960-1980
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(Per 1,000)

	S	Sabah	Sarawak				
Year	Crude death rate	Infant mortality rate	Crude death rate	Infant mortality rate			
1960	8.3	63.2	5.8	55.0			
1965	5.6	36.1	5.3	40.7			
1970	5.9	32.7	5.2	81.1			
1975	4.3	27.8	5.0	30.2			
1980	4.2	27.6	42	23.9			

Sources: Malaysia, Revised Inter-Censal Population Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974).

Malaysia, Vital Statistics, Sabah (Kota Kinabalu, Department of Statistics, various years).

Malaysia, Vital Statistics, Sarawak (Kuching, Department of Statistics, various years).

Figure 6. Infant mortality rate by ethnic group, Peninsular Malaysia, 1960-1980



Source: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

Figure 7. Toddler mortality rate by ethnic group, Peninsular Malaysia, 1960-1980



Source: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

Figure 8. Neo-natal mortality rate by ethnic group, Peninsular Malaysia, 1960-1980



Source: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

B. SEX- AND AGE-SPECIFIC PATTERNS OF MORTALITY

Patterns of mortality must be studied according to the differences in the rates for males and females and among the various age groups of the population.

The rates described earlier, i.e. infant, toddler and maternal mortality rates, were specific to certain age groups and sexes. Infant and toddler rates denote the level of mortality for ages under one year and one to four years, respectively. Likewise, maternal mortality rates are concerned only with females of childbearing ages.

From the limited data available, it has been found that there are no significant differences across the childbearing age groups. It may be useful however, to look further into patterns of infant and toddler mortality by sex and in relation to the over-all mortality pattern by age and sex.

1. Infant mortality by sex

Infant mortality is universally higher for males than for females and this is reflected in

Malaysian data. Table 73 shows infant mortality rates (IMR) by sex during the period 1957-1982. In 1982, the infant death rate for males was 21.7 per 1,000 live births, while for females it was 16.6 per 1,000, a difference of 5.1 points, or about 24 per cent higher for males. The rate in 1957 for males was 84.0 per 1,000, while that for females was 66.5 per 1,000, a positive difference of 17.5 points, or 21 per cent higher for males. The male rate thus declined by 74 per cent, while that for females declined by about 75 per cent over the period 1957-1982.

2. Toddler mortality rates by sex

Table 73 also shows toddler mortality rates, which have a similar pattern of decline by sex. Over the period 1957-1982, the difference in percentage decline for the two sexes was negligible, that is, a decline of 83 per cent for males and 84 per cent for females. This decline was slightly faster for females over the period 1957-1965, when the rate fell from 10.6 to 5.7 per 1,000, compared to that of males; which fell from 10.7 to 5.9 per 1,000. By 1982, the toddler mortality

	Т	otal	Malay		Ch	inese	Indian		
<u></u>	Male	Female	Male	Female	Male	Female	Male	Female	
Infant ^a mort	ality rate								
1957	84.0	66.5	107.7	82.9	50.9	42.6	82.8	68.3	
1965	55.6	44,2	68.2	53.6	36.3	28.2	56.5	49.6	
1970	45.9	35.4	53.8	41.0	32.2	24.6	50.7	41.1	
1975	37.3	29.0	41.6	32.6	27.6	20.1	41.8	34.9	
1980	26.7	21.1	30.0	23.6	18.2	13.8	30.6	26.7	
1982	21.7	16.6	25.2	18.4	12.9	11.3	23.1	19.1	
Toddler ^b mo	rtality rate								
1957	10.7	10.6	14.2	14.0	6.8	6.4	9.0	9.0	
1965	5.9	5.7	7.9	7.7	3.2	29	5.5	5.1	
1970	4.2	4.2	5.6	5.7	2.1	2.0	3.7	4.0	
1975	3.1	3.1	4.0	4.0	1.4	1.4	3.3	3.4	
1980	2.1	2.0	2.6	2.5	1.0	1.1	2.2	2.4	
1982	1.8	1.7	2.2	2.0	0.8	0.7	1.9	2.0	

 Table 73. Infant and toddler mortality rates by ethnic group and sex, Peninsular Malaysia 1957-1982

 (Per 1,000 live births)

Sources: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

^a Under one year.

^b One to four years.

rate had almost equalized between the sexes at 1.8 per 1,000 for males and 1.7 per 1,000 for females.

3. Age-specific mortality rates

The age-specific death rates by ethnic group and sex for the years 1957, 1970 and 1980 are presented in tables 74 and 75. It can be seen that the rates declined for all age groups. In the 13-year period 1957-1970, the age-specific mortality rate for the age group 5-9 declined from 3.0 to 1.5 per 1,000 for males. By 1980, the age-specific mortality rates for males in the 5-9 age group had further declined to 0.9 per 1,000. For almost all ages, mortality rates were higher for males than for females.

4. Life expectancies

Life expectancy at birth is a good summary measure of mortality levels, indicating as it does the average remaining life from birth an individual or a group of individuals in a stationary population is expected to live. Males generally have lower life expectancies than females. Data for Peninsular Malaysia show that in 1957, the life expectancy at birth for males was 55.8 years, compared to 58.2 years for females.

The expectation of life at birth for Peninsular Malaysia increased considerably over the years 1957-1970, as seen in table 76. For males, it increased by 14 per cent to 63.5 years in 1970. For females, it increased by 10 years, from 58.2 to 68.2 years over the same period, an increase of about 17 per cent.

Over the years 1970-1975, life expectancies at birth increased by 3 per cent and 4 per cent for males and females, respectively. In 1975, life expectancy at birth for males was 65.4 years, and for females was 70.8 years.

Male life expectancy at birth in 1957 was 4 per cent lower than that for females. By 1970, it was 7 per cent lower; in 1975 and 1979 it was 8 per cent lower. In 1982, life expectancy at birth for males was 67.2 years, while that for females was 72.5 years.

C. CAUSES OF DEATH

Mortality statistics with regard to the causes of death for Malaysia show that certain diseases which are characteristic of modern-day living have taken over from common tropical diseases. Such diseases, for example heart disease, have now become major killers. This change could be partly due to advances in medicine, which while providing cures and widespread control of common diseases, also allows for more efficient diagnosis of new or once unknown diseases. In 1957, the single disease causing the highest mortality (apart from perinatal causes) was pneumonia. In later years, this place was taken by heart disease and hypertensive diseases.

Table 77 shows changes in the proportions of deaths by selected causes for the years 1957, 1970 and 1981. Not counting perinatal mortality, the single largest killing disease in 1957 was pneumonia, contributing to 10.1 per cent of certified deaths. This share, however, declined to 4.7 per cent in 1981. Tuberculosis, with a sizeable contribution of 6.1 per cent in 1957, declined steadily to 5.2 and 2.4 per cent, respectively, in 1970 and 1981.

Heart disease remained the major killer in both 1970 and 1981. It was the cause of 9.9 per cent of deaths in 1970, and of 14.5 per cent in 1981, compared with only 3.2 per cent in 1957. Malignant neoplasm was the second major killing disease, causing 9.9 per cent of deaths in 1981. By contrast in 1957, only 2.6 per cent of all certified deaths were caused by malignant neoplasm.

Death by accidents has also been on the increase since 1957. From 6.9 per cent in 1957, it rose steadily to 8.0 and 9.6 per cent in 1970 and 1981 respectively.

It must be borne in mind that the data presented are limited only to deaths which are medically certified and inspected. These made up only about 29 per cent of total deaths in 1957, 32 per cent in 1970, and 37 per cent in 1981. This is most relevant when looking at the ethnic differential, where percentages are significantly different. This is probably caused by a factor related to urban-rural distribution.

D. MORTÁLITY DIFFERENTIALS

Differentials in levels and trends of mortality for Malaysia can be observed according to the different ethnic or community groups, and also to the different areas or states, which may be grouped by their level of urbanization.

_		Malay			Chinese				In	lian		Total				
Age		957	19	970		957	19	70		957	19	970	1	957	1	1970
group	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0 ·			57.8	43.1			36.2	28.0			56.1	44.3			50.3	38.3
1 - 4	13.3	13.5	6.0	6.0	6.0	6.0	2.3	2.3	8.4	7 <i>.</i> 9	4.2	4.6			4.5	4.6
5 - 9	4.4	4.5	1.9	1.8	1.7	1.7	0. 9	0.7	1.8	1.8	1.6	1.5	3.0	2.4	1.5	1.4
10 - 14	2.2	2.1	1.3	1.1	1.1	1.1	0.8	0.6	1.5	1.8	1.0	0.8	1.7	1.5	1.0	0.9
15 - 19	2.8	3.6	1.5	1.4	1.3	1.3	1.3	0.7	2.1	3.6	1.9	1.7	2.1	2.7	1.5	1 .2
20 - 24	3.4	5.2	1.6	2.0	2.3	2.3	2.2	0,8	2.1	5.0	1 9	2.0	2.8	4.0	1.9	1.6
25 - 29	3.7	6.9	1.9	2.7	2.9	2.9	2.0	1.1	3.0	5.8	2.9	2.4	3.3	5.2	2.0	2.1
30 - 34	4.9	7.6	2.9	3.0	3.5	3.5	2.5	1.5	3.9	6.7	3.8	2.7	4.2	6.1	2.9	2.5
35 - 39	6.8	8.9	3.5	3.9	4.9	4.4	3.0	1.5	4.6	7.5	5.3	3.9	5.9	7.1	3.5	3.0
40 - 44	9.0	10.0	5.2	4.8	7.4	5.0	4.7	3.3	7.2	7.9	7.6	5.9	7.8	7.4	5.4	4.4
45 - 49	15.9	15.4	8.0	7.0	10.6	6.4	7.5	4.3	11.0	14.1	11.6	8.5	12.6	10.2	8.4	6.3
50 - 54	18.7	15.0	13.3	12.0	16.5	9.0	14.4	6.5	15.2	19.0	18.9	14.1	18.4	14.1	14.5	10.2
55 - 59	31.9	31.8	19.1	17.0	26.4	12.9	21.0	10.6	24.6	30.3	29.9	29.5	26.3	19.8	21.5	1 4.9
60 - 64	33.3	25.1	33.5	30.7	41.0	21.8	36.0	16. 9	41.1	43.0	47.0	39.9	38.3	28.1	36.2	25.6
65 - 69	61.4	53.1	49.5	44.1	61.6	31.9	50.4	26.2	59.0	73.7	61.6	58.9	54.5	38.6	51.5	35.8
70-74	86.1	78.3	67.7	60.5	112.5	74.5	82.7	45.6	95.5	119.1	104.0	89.8	75.4	52.6	77.4	55.1
75 - 79			91.1	81.7			117.0	71.3			132.3	114.8	96.1	73.6	108.1	76.3
80 - 84			115.7	99.5			171.7	111.9			176.0	135.0	129.1	101.6	139.2	105.7

Table 74. Age-specific mortality rates by ethnic group and sex, Peninsular Malaysia, 1957 and 1970(Per 1,000)

Source: Malaysia, Abridged Life Tables, Malaysia, 1970 (Kuala Lumpur, Department of Statistics, 1974).

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A	Ma	alay	Ch	inese	In	dian	า	otal
Age group	Male	Female	Male	Female	Male	Female	Male	Female
0 - 4	9.0	7.4	4.6	3.8	8.8	8.0	7.7	6,4
5-9	1.0	0.8	0.6	0.4	0.8	0.8	0.9	0.7
10 - 14	0.7	0.6	0.6	0.3	1.0	0.5	0.7	0.5
15 - 19	1.1	0.6	1.2	0.5	1.4	1.4	1.2	0.7
20 - 24	1.6	0.8	1.9	0.6	2.4	1.4	1.8	0.8
25 - 29	1.8	1.1	1.8	0.7	2.9	1.7	1.9	1.0
30 - 34	1.7	1.9	1.9	1.1	2.9	1.9	19	1.6
35 - 39	2.4	2.2	2.4	1.4	3.6	2.8	2,5	2.0
40 - 44	3.6	3.0	3.6	2.0	7.6	3.9	4.0	2.7
45 - 49	5.6	4.4	6.4	3.4	12.1	6.1	6.6	4.2
50 - 54	9.6	7.5	10.4	5.1	17.7	8.9	10.7	6.8
55 - 59	16.7	11.8	15.8	8.2	28.0	15.6	17 <i>9</i>	10.9
60 - 64	25.6	20.5	26.7	14.8	40.5	28.5	27.9	19.0
65 - 69	40.1	34.4	47.8	24.3	59.4	40.4	43.4	30.1
70 - 74	61.9	56.0	60.0	39.8	82.6	66.2	63.3	49.2
75 - 79	86.6	73.6	91.5	62.8	117.2	101.5	92.0	69.0
80 - 84	115,3	101.6	139.1	96.4	134.7	118.4	126.7	99.5
85 +	143.1	116.8	192.6	182.2	166.7	121.8	161.6	146.2

 Table 75. Age-specific mortality rates by ethnic group and sex, Peninsular Malaysia, 1980

 (Per 1,000)

Source: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1980).

Note: Excluding deceased the age-group of which was unknown.

1. Ethnic differentials

Community differentials in mortality rates are most marked during the earlier period, 1947-1957. Mortality was highest up to the early 1960s, particularly for Malays. In 1947, the crude death rate for Malays was 24.3 per 1,000, while the corresponding rates for Chinese and Indians were 14.3 and 15.8 per 1,000, respectively. By the late 1950s, the crude death rate had declined to around 14 per 1,000 for Malays, 8 per 1,000 for Chinese and 10 per 1,000 for Indians.

The mortality decline up to 1970 was highest for Malays; the CDR decreased to 7.6 per 1,000, a decline of 69 per cent from 1947. The Chinese rate declined by 54 per cent, while that of Indians declined by 46 per cent over the same period. By 1975, the CDR for Indians was highest at 8.0 per 1,000, followed by Malays at 6.5 per 1,000, and lowest for Chinese, 6.0 per 1,000. For the year 1980, the crude death rate was still highest for Indians (6.6 per 1,000), while the lowest was recorded for Malays (5.0 per 1,000).

A similar pattern is shown by the trends in infant mortality over the interval 1947-1970. The Malays had the highest IMK in 1947 at 129 per 1,000 live births, and this declined to 96 per 1,000 in 1957, and had fallen further to 48 per 1,000 by 1970. The IMR for Malays in 1982 was 22 per 1,000. The rate had thus declined by 83 per cent from 1947 to 1982. Infant mortality was lowest for Chinese in 1947, at 70 per 1,000. This declined by 83 per cent to 12 per 1,000 in 1982.

The infant mortality rate, unlike the crude death rate, was still highest for Malays in 1982. In 1982, the infant mortality rate for Malays was 22
Year	Life expectancy at birth (e_0°)											
	Ma	Malay		inese	Inc	dian	Total					
	Male	Female	Male	Female	Male	Female	Male	Female				
1957	50.23	53.39	59.52	66.73	57.49	54.56	55.80	58.20				
1966	61.32	62.51	66.22	72.18	62.52	61.92	63.13	66.04				
1968	61.73	62.95	66.18	71.71	61.44	60.21	63.27	66.08				
1970	63.75	65.52	65.08	73.36	60.16	63.87	63.52	68.21				
1973	65.40	67.90	65.62	73.51	60.05	62.92	64.45	69.65				
1975	66.07	68.96	66.73	74.79	60.69	65.09	65.40	70.77				
1979	67.88	70.98	68.10	75.84	63.23	68.00	67.17	72.49				

Table 76. Life expectancy at birth by ethnic group and sex, Peninsular Malaysia, 1957-1979(Years)

Sources: H. Fell, Population Census, Federation of Malaya, Report No. 14 (Kuala Lumpur, 1957).

Malaysia, Abridged Life Tables, Malaysia, 1970 (Kuala Lumpur, Department of Statistics, 1974).

Malaysia, Life Tables For West Malaysia, 1966, Research Paper No. 2 (Department of Statistics, 1969).

Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

Note: For the years 1970-1979, the population base was adjusted for under-enumeration.

per 1,000. Malays had the highest rates for practically the entire period. Infant mortality rates for Chinese however, remained lowest at 12 per 1,000, in 1982.

Similar ethnic differentials were also observed for toddler and neo-natal mortality rates. A less rapid decline was registered for Malays from 1957 to the early 1960s, when compared with Chinese and Indians, who had more uniform declines throughout the period. The drop in Malay toddler mortality rate was greatest in the period 1967-1972, from 7.4 to 4.3 per 1,000. However, the toddler mortality rate for Malays further declined to 3 per 1,000 in 1980. The lowest toddler mortality rate in 1980 was registered by Chinese (at 0.79 per 1,000) while that recorded by Malays was still highest.

The 1957 and 1970 life expectancies at birth showed significant differentials among the major ethnic groups. The patterns by sex also differed considerably among the three groups, as seen in table 76. In 1957, females life expectancy at birth for Malays was higher than that for males by 3.2 years, while for the Chinese, female life expectancy was higher than its male counterpart by 7.2 years.

Life expectancy at birth for Chinese females remained highest throughout the period. The dif-

ference by sex between Malays and Chinese held througout the period, such that by 1979, there was hardly a discernable difference between life expectancies for Malay males and Chinese males (67.9 and 68.1 years, respectively). The difference was significant, however between the females in these groups: 71 years for Malays, and 75.8 years for Chinese.

2. State differentials

A study of mortality differentials among the eleven states of Peninsular Malaysia (counting the Federal Territory as part of Selangor) may also throw light on urban-rural differentials, for which data are either lacking or unreliable. Selangor, Penang, Perak and Johore constitute the four most urbanized states of Peninsular Malaysia. The least urbanized are the east and northern states of Kelantan, Trengganu, Kedah and Perlis, while the remaining states of Pehang, Negri Sembilan and Malacca are somewhere in between.

The differentials in crude death rates as shown in tables 78 and 79 seem to indicate that higher death rates prevail in the more rural states. For 1947 as well as 1975, the states with the highest crude death rates were Kelantan, Trengganu and Parlis. For 1980, Kelantan and Perlis

Table 77. Proportion of certified and inspected deaths by selected causes in each ethnic group,
Peninsular Malaysia, 1957, 1970 and 1981
(Per cent)

	1957				1970				1981			
Cause of death	Malay	Chinese	Indián	Total	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total
1. Tuberculosis	3.2	7.9	4.8	6.1	3.7	6.4	4.1	5.2	2.4	2.6	2.0	2.4
2. Heart disease	2.6	3.2	3.9	3.2	9.3	9.2	11.8	9.9	14.2	13.1	18.5	14.5
3. Hypertensive diseases	0.8	3.0	2.6	2.4	0.5	1.4	1.1	1.1	0.7	1.4	0.9	1.1
4. Cerebrovascular disease	3.6	6.3	6.0	5.6	4.3	7.3	6.6	6.4	5.6	9.5	7.3	7.7
5. Pneumonia	7.4	11.0	11.2	10.1	6.4	5.0	5.6	5.5	6.0	3.5	5.2	4.7
6. Malignant neoplasm	0.8	3.2	3.0	2.6	4.3	9.2	7.8	7.7	5.1	14.0	8.5	9.9
7. Perinatal mortality	14.7	9.1	15.1	11.6	25.3	15.7	16.0	18.2	23.0	9,3	8.4	13.7
8. Accident	9.3	5.6	6.8	6.9	10.0	7.8	5.9	8.0	11.6	8.7	85	9.6
9. Other	57.6	50.7	46.6	52.5	36.2	38.0	41.1	38.0	31.4	37.9	40.7	36.4
Total certified deaths	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage of certified deaths out of total death	s 12.3	54.3	54.0	29.1	15.2	52.7	55.7	32.3	23.6	51.6	55.4	37.0

Sources: E.M. McDonald, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government Printer, 1957). Malaysia, Vital Statistics, Peninsular Malaysia (Department of Statistics, various years).

State	1947	1955	1960	1965	1970	1975	1980
Johore	15.4	9.8	9.1	7.4	6.6	5.6	5.3
Kedah	24.4	13.0	11.4	9.5	7.3	6.6	6.0
Kelantan	22.0	13.0	9.7	9.9	10.1	8.3	6.8
Malacca	20.0	11.2	10.2	8.4	7.6	6.4	6.1
Negri Sembilan	18.9	10.9	9.3	7.8	7.4	6.1	6.4
Pahang	22.5	13.4	9.2	7.1	7.3	6.3	5.0
Penang	19.0	11.1	9.7	8.0	7.3	6.7	6.6
Perak	17.9	12.0	9.4	8.7	7.8	6.6	6.6
Perlis	22.7	11.3	11.5	8.3	7.3	7.6	6.8
Selangor (+ Federal Territory)	15.1	9.6	8.0	6.7	5.6	5.8	5.2
Trengganu	31.0	14.0	13.2	9.8	9.3	7.2	6.4

Table 78. Crude death rate by state of occurrence, Peninsular Malaysia, 1947-1980(Per 1,000)

Sources: R.B. MacGregor, Report on the Registration of Births and Deaths (Kuala Lumpur, Government Printer, 1947).

E.M. McDonald, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government Printer, 1957).

Malaysia, Revised Inter-Censal Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974).

Malaysia, Vital Statistics, Peninsular Malaysia, (Kuala Lumpur, Department of Statistics, various years).

State	1947-1957	1955-1960	1960-1965	1965-1970	1970-1975	1975-1980
Johore	27.3	7.1	18.7	10.8	15.2	5.4
Kedah	42.6	12.3	16.7	23.2	9.6	9.1
Kelantan	30.9	25.4	-2.1	-2.0	17.3	18,1
Malacca	32.5	8.9	17.7	9.5	15.8	4.7
Negri Sembilan	35,5	14.7	16.1	5.1	17.6	-4.9
Pahang	44.0	31.3	22.8	2.8	13.7	20.6
Penang	37.9	12.6	17.5	8.8	8.2	1.5
Perak	27.4	21.7	7.5	10.3	15.4	0.0
Perlis	40.1	-1.8	27.8	12.1	-4.1	10.5
Selangor (+ Federal Territory)	34.4	16.7	16.3	16.4	-3.6	10.3
Trengganu	53.5	5.7	25.8	5.1	22.6	11.1

Table 79. Percentage change in crude death rate by state of occurrence, PeninsularMalaysia, 1947-1980

Sources: R.B. MacGregor, Report on the Registration of Births and Deaths (Kuala Lumpur, Government Printer, 1947).

E.M. McDonald, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government Printer, 1957).

Malaysia, Revised Inter-Censal Estimates, Malaysia (Kuala Lumpur, Department of Statistics, 1974).

Malaysia, Vital Statistics, Peninsular Malaysia, (Kuala Lumpur, Department of Statistics, various years).

still had highest crude death rates, both at 6.8 per 1,000.

Infant mortality may be a more reliable measure for establishing differences in health conditions among states. Tables 80 and 81 show that Trengganu had the highest infant mortality rate of 168 per 1,000 in 1947, and the states of Kelantan, Kedah and Perlis maintained the highest rates up to the year 1975. In 1980, however, Kelantan had the highest rate followed by Trengganu and Kedah. In 1980, the infant mortality rate for Kelantan was 32 per 1,000.

Toddler mortality rates by state are shown in table 82. In 1970, Trengganu had the highest toddler mortality rate, of 8.2 per 1,000, followed by Kelantan with 7.5. This trend continued for the years 1975 and 1980. By 1980, the toddler mortality rate had dropped to 3.3 per 1,000 for Kelantan and 3.4 per 1,000 for Trengganu.

State	1947	1955	1960	1965	1970	1975	1980
Johore	83	82	69	45	37	31	25
Kedah	119	84	88	59	42	40	29
Kelantan	116	79	69	64	59	44	32
Malacca	104	83	68	51	44	34	19
Negri Sembilan	109	70	60	42	40	27	24
Pahang	107	88	69	47	43	32	27
Penang	102	70	58	39	38	29	20
Perak	100	81	69	53	42	33	25
Perlis	136	78	82	44	36	43	24
Selangor (+ Federal Territory)	88	63	58	44	29	27	21
Trengganu	168	111	98	64	56	38	30

Table 80. Infant mortality rate by state of occurrence, Peninsular Malaysia, 1947-1980

Sources: R.B. MacGregor, Report on the Registration of Births and Deaths (Kuala Lumpur, Government Printer, 1947).

E.M. McDonald, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government various years).

Ibrahim bin Ali, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government Press, 1960).

Malaysia, Vital Statistics, West Malaysia/Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

State	1947-1957	1955-1960	1960-1965	1965-1970	1970-1975	1975-1980
Johore	12	16	35	18	16	19
Kedah	34	-5	33	29	5	28
Kelantan	29	13	7	8	25	87
Malacca	30	18	25	14	23	44
Negri Sembilan	36	14	30	5	33	11
Pahang	29	22	32	9	26	16
Penang	34	17	33	3	24	31
Perak	22	15	23	21	21	24
Perlis	37	5	46	18	-19	44
Selangor (+ Federal Territory)	25	8	24	34	7	22
Trengganu	32	12	35	13	32	21

Table 81. Percentage decline in infant mortality rate by state of occurrence,
Peninsular Malaysia, 1947-1980

Sources: R.B. MacGregor, Report on the Registration of Births and Deaths (Kuala Lumpur, Government Printer, 1947).

E.M. McDonald, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government Printer, various years).

Ibrahim bin Ali, Report of the Registrar-General on Population, Births, Deaths, Marriages and Adoptions, Federation of Malaya (Kuala Lumpur, Government Press, 1960).

Malaysia, Vital Statistics, West Malaysia/Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

State	1970	1975	1980	Percentage decline 1970-1975	Percentage decline 1975-1980
Johore	3.4	2.5	1.9	26.5	24.0
Kedah	4.6	3.7	2.8	20.6	24.3
Kelantan	7.5	6.2	3.3	17.2	46.8
Malacca	2.7	2.0	1.6	25.8	20.0
Negri Sembilan	3.8	2.1	1.7	44.3	19.0
Pahang	5.5	4.0	2.3	27.0	42.5
Penang	2.4	1.9	1.6	22.5	15.8
Perak	4.6	2.8	2.3	40.0	17.9
Perlis	2.9	2.0	2.4	29.8	-20.0
Selangor (+ Federal Territory)	2.5	2.0	1.6	21.4	20.0
Trengganu	8.2	5.7	3.4	30.5	40.4

Table 82. Toddler mortality rate by ethnic group and state of occurrence,Peninsular Malaysia, 1970, 1975 and 1980

Source: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

VII. POPULATION POLICY AND FAMILY PLANNING*

A. POPULATION POLICY

1. Introduction

Before the 1940s, rapid population growth was due mainly to large influxes of Chinese, Indian and other migrants. Natural increase was of minimal importance as the high birth rate was then balanced by a high death rate. Subsequent to the 1940s, with the termination of liberal migration policies, population growth has been the result of high levels of natural increase. Until the achievement of independence in 1957, the official view was that Malaya was a land-surplus country and thus had no population problems. Indeed for much of the immediate post-war period, rapid population growth was seen as an important factor in the development of Malaya.

The consequent rapid growth in the post-war period posed economic problems. The growth of the synthetic rubber industry resulted in the decline of the real price of natural rubber. Subsequent doubts about natural rubber's continued viability resulted in a decline in the rate of growth of employment in agriculture. Consequently, the unemployment rate rose in the late 1950s. Policy measures implemented to deal with the unemployment problem included state-sponsored land development schemes, fiscal incentives to stimulate industrialization and other employment-creation schemes. These measures proved to be ineffective in reducing the unemployment rate, particularly in rural areas, because the rate of growth of the rural labour force was higher than the job opportunities created by the cultivation of new land schemes. This excess supply of rural labour resulted in a relatively high rate of rural-to-urban migration.¹

2. Official attitude

The attitude of the Government towards family planning was largely negative throughout the 1950s. In 1963 however, the Economic Planning Unit (EPU) reviewed the then current fiveyear plan and became aware of the serious adverse socio-economic consequences of the rapid rate of population growth, at that time in excess of 3 per cent per annum. EPU requested technical assistance from the Ford Foundation to assess the long-term relationship between population growth and economic development. The Ford Foundation study concluded that a large-scale effort was required by the Malaysian Government to reduce fertility if family welfare were to be enhanced.²

By 1964, owing to the awareness of serious adverse socio-economic implications of a rapid rate of population growth, the government attitude towards family planning became more positive.

B. FAMILY PLANNING PROGRAMME

1. Voluntary family planning

A voluntary family planning movement had been active in several parts of the country before the initiation of the government-sponsored national family planning programme. The first voluntary family planning organization began operations in the State of Selangor in July 1953. By 1962, each of the eleven states in Peninsular Malaysia had a Family Planning Association for implementing the family planning programme at the state level. The Federation of Family Planning Associations (FFPA) was responsible for over-all planning, co-ordination and policy formulation of the state FPA programmes, though in each state the respective associations remained largely autonomous.

Contributed by Noor Laily binti Dato' Abu Bakar and Tan Boon Ann, National Family Planning Board. The senior author is currently Managing Director, NURI Child Care Centre, Kuala Lumpur.

¹ Eddy Lee, Michael Ong and T. L. Smith, "Family planning in West Malaysia: the triumph of economics and health over politics", in *The Politics of Family Planning in the Third World* (London, George Allen Unwin, 1973).

² D. Gayl Ness, "The politics of family planning in Malaysia and the Philippines", *Journal of Comparative Administration*, vol. 3, No. 3 (November 1971).

2. The national programme

EPU played a vital role in changing the government attitude towards family planning by creating an awareness of the adverse effects of rapid rates of population growth on the economy. In 1964 a cabinet decision led to the establishment of a National Family Planning Programme as part of government policy. Subsequently a special Cabinet Sub-Committee on Family Planning was created to make recommendations on ways and means of obtaining support for fertility reduction and on approaches towards effective implementation of a family planning programme. In August 1965 the Cabinet accepted the Sub-Committee report. This called for the adoption of a positive social policy of family planning and the creation of the National Family Planning Board (NFPB) to implement this programme. In June 1966, the Family Planning Act³ was passed. Following that, NFPB was established as an inter-ministerial organization having statutory powers and autonomous The Knowledge, Attitude and Practice status. Survey (KAP) on family planning carried out in 1966/67⁴ gave further impetus to the government decision. It indicated the readiness of Peninsular Malaysia's population for such a programme. The survey revealed that 70 per cent of those interviewed in the sample approved of family planning; 66 per cent wanted to learn more about it; 17 per cent intended to practise family planning; and another 26 per cent wanted to do so after one or more births. The survey also indicated that 30 per cent of the women interviewed did not want to have any more children.

3. Objectives and organization of the programme

The implementation of the national family planning programme was an integral part of the socio-economic development plan of Malaysia. This was reflected in the First Malaysia Plan (1966-1970), which called for the long-term reduction of the population growth rate from 3 to 2 per cent by 1985.

The National Family Planning Board is directly responsible to the Prime Minister. The

Board consists of 21 members, with 10 members representing government ministries and departments and the remaining ten members coming from the public. The Director-General is the chief executive, and is assisted by a Deputy Director-General and five directors of the Administration, Finance and Supply, the Service, the Information, Education and Communication, the Training and Medical Research, and the Research, Evaluation and Management Information System Divisions (see figure 9).

The functions of the Family Planning Board are stipulated in the Family Planning Act No. 42 of 1966, namely:

(a) Formation of policies and methods for the promotion and spread of family planning knowledge and practice on the grounds of health and welfare of mothers and children, and welfare of the family;

(b) Programming, directing, administering and co-ordinating family planning activities in the country;

(c) Training all personnel involved in family planning extension work;

(d) Conducting research on medical and biological methods relating to family planning;

(e) Promotion of studies and research of relationships among social, cultural, economic and population changes, and also promotion of research concerning fertility and maternity patterns in the country;

(f) Setting up and operating a system of evaluation to assess the effectiveness of the programme and its progress towards the attainment of national objectives.

The annual operating budget of the national family planning programme (excluding the budget for Federation of Family Planning Associations and some marginal costs of other participating agencies) was about 0.2 per cent of the total national operating budget and about 2.6 per cent of the total health operating budget for the years 1973-1981; the corresponding figures for 1982 were 0.1 per cent and 1.9 per cent, respectively (table 83).

Table 84 shows the number of staff allocated to NFPB and man-years utilized for selected

³ The Family Planning Act 1966 is now known as the Population and Family Development Act 1966.

⁴ Noor Laily binti Dato' Abu Bakar and others, *Malaysia*, *Nutritional Population and Family Development Programme* (Kuala Lumpur, National Family Planning Board, 1982).

Figure 9. Organizational structure of the National Family Planning Board (NFPB), Malaysia



Source: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), p. 75.

^a Effective from June 1982.

Year	Family planning	Health	National	
1973	2.7	244	3 155	
1975	3.7	334	4 595	
1977	12.8	522	7 399	
1979	15.2	594	10 040	
1981	16.1	829	15 686	
1982	17.0	900	16 671	

Table 83. Family planning, health and national
budgets, Malaysia, 1973-1982
(\$M million)

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), p. 88.

Malaysia, Annual Statistical Bulletin, Malaysia (Kuala Lumpur, Department of Statistics, various years).

years. Man-years utilized were less than the number of staff allocated partly because the recruitment of staff did not take place at the beginning of the year. This was also partly because it is difficult to obtain medical doctors and other medical personnel, the turnover rates of which are high.

C. POLICY AND PROGRAMME ORGANIZ-ATION AND IMPLEMENTATION

Act of Parliament No. 42 of 1966⁵ empowered the Board to formulate policies and

methods for the promotion and spread of family planning knowledge and practice in Malaysia to improve the health of mothers and children and the welfare of the family. Priority was given to Peninsular Malaysia because population density and the growth rate were greater than those of Sabah and Sarawak.

NFPB has developed a plan aimed at a phased introduction and implementation of information, education and contraceptive service activities to achieve its long-term objective under the First Malaysian Plan. An intensive training. education and information programme was developed and implemented to cater to the needs of the service programme. Simultaneously, a system of research and evaluation was introduced to assess the programme from time to time and to make adjustments and improvements in policies. Towns and cities are centres for development, with health infrastructure facilities: they serve as the foci for the flow of information and services to rural areas. Therefore NFPB has designed and implemented its programme in four main phases, with the first phase in metropolitan and urban areas, extending gradually to rural areas in the fourth phase. Phase I covered eight large municipalities with maternity hospitals and certain rural health centres, which also served as pilot study areas. Phase' II emphasized the expansion of services into smaller towns and adjoining rural health centres. Phase III covered the remaining rural health centre areas, while Phase IV was aimed at rural areas serviced by a combination of mobile units and Kampong Bidans (TBAS).

	1975		1977		1979		1981	
Type of personnel	Staff allocation	Man-years utilized	Staff allocation	Man-years utilized	Staff allocation	Man-years utilized	Staff allocation	Man-years utilized
Managerial and professional	28	24	45	33	48	39	61	49
Executive and sub-professional	1 59	57	79	69	85	80	97	86
Clerical and technical	163	148	212	203	269	247	328	286
Subordinate and manual	364	315	448	425	526	506	584	547
Total	614	544	784	730	928	872	1 070	968

 Table 84. Number of staff allocated and man-years of staff utilized by year, National Family

 Planning Board component, Malaysia, 1975-1981

Source: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), p. 95.

⁵ Malaysia, Acts of Parliament, No. 42, 1966, Family Planning Act, 1966 (Kuala Lumpur, Government Printer, 1966).

Figure 10 shows the coverage of the national family planning service programme in 1976. Besides the establishment of static (or main) clinics by NFPB in general and district hospitals, maternity hospitals, rural health centres and health subcentres, the Family Planning Associations (FPA), which were established in 1952, have also played a significant role in family planning motivation and services. In addition, the participation of private practitioners, estate management, representatives of industrial sectors and others has been a noteworthy feature of the Malaysian family planning programme. The programme has emphasized the use of contraceptive methods such as the pill, IUD and the clinic approach, which utilizes medical and paramedical personnel in the provision of services.

During the implementation of the third and fourth phases, lack of trained personnel, facilities and resources adversely affected the NFPB expansion programme. Subsequently, a plan was carried out to integrate the family planning services into the rural health services under the Ministry of Health. This was an attempt to co-ordinate the activities of ministries and agencies involved in population activities.

In 1970, a Central Co-ordinating Committee was established to co-ordinate the efforts of the Ministry of Health, NFPB and the Federation of Family Planning Associations in the family planning/rural health services integration programme. Four sub-committees responsible for services, training, information and evaluation respectively, were set up. A State Co-ordinating Committee was formed in each state to plan the programme at the state level.

This integration programme was later strengthened by the Population Project, which was





Source: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), p. 103.

- ^a Maternity clinic with quarters/rural clinic.
- ^b Traditional birth attendants.

- ^c Malay traditional practitioners.
- ^d Chinese traditional practitioners.

jointly financed by the World Bank, the United Nations Fund for Population Activities (UNFPA) and the Government of Malaysia. The World Bank agreed to loans of \$US 5.0 million and UNFPA to a grant of \$US 4.3 million, while the Malaysian Government contributed \$US 5.2 million to enhance the programme's efforts.

While family planning services were being integrated in the rural health districts, another form of integration was considered for implementing the national family planning programme in the Federal Land Development (FELDA) Scheme. This integration was the result of the tripartite arrangement in 1970 of the FELDA authorities, NFPB and the Health Division of the Ministry of A procedural arrangement was made Health. whereby midwives located in the FELDA Schemes were trained by NFPB to provide family planning services along with other medical services. NFPB also provided supplies, logistical support and technical assistance under the supervision of the Ministry of Health.

The tripartite grouping agreed that families should be effectively planned to obtain the optimum benefit from social and economic development. The FELDA Authorities encouraged family planning as part of their development strategies in the social and economic spheres.

NFPB recognized the importance and influential nature of the Kampong Bidans, or traditional birth attendants (TBAs). Accordingly in 1972, it developed a programme which was aimed at utilizing trained TBAs to provide services in areas inaccessible to the NFPB or other servicing agencies. There are now about 3,000 TBAs in Peninsular Malaysia. For purposes of record keeping, they employ a system whereby yellow coupons are given to new acceptors and green are given thereafter. TBAs who recruit new clients to accept family planning are given monetary incentives which are allowed to be paid in addition to regular salary because they are treated as "compensatory" payments.

The Population Project was aimed specifically at strengthening the national family planning programme conducted by NFPB, Ministry of Health and FFPA. It was also aimed at integrating population education with the school curriculum as well as with the establishment of a Population Research and Studies Programme in the University of Malaya. NFPB serves as the Secretariat of the Project.

Under the Third Malaysia Plan (1976-1980), NFPB had an intensive and extensive family planning programme which used a multidisciplinary approach to population problems. In addition a better co-ordinating mechanism was sought to exploit potential resources from both governmental and private agencies. The process of strengthening the programme included the identification of potential resources in concerned agencies or bodies, a review of current efforts at the central and peripheral levels, the development of alternative service strategies, and planning and organizatraining. information. programme tion of monitoring and evaluation.

During the 1970s rural-to-urban migration, which resulted in increased slum and squatter settlements in and around several cities, especially Kuala Lumpur, began to cause some concern. A briefing from the late Prime Minister Tun Haji Abdul Razak prompted the National Action Council to direct NFPB to give equal emphasis to urban and rural areas in the future implementation of its programmes. The Board was directed to improve its programmes in urban areas, beginning with Kuala Lumpur and gradually extending to George Town (the city of Penang), Ipoh in Perak and other urban centres throughout Peninsular Malaysia. Priority was given to the under-priviledged sectors of the population. An intensive review of past programmes indicated that urban sectors were not adequately covered and that services in these areas must be improved and strengthened.

D. EVALUATION OF PROGRAMME

1. Programme performance

Under the First Malaysia Plan (1966-1970), the national family planning programme aimed at reducing the crude birth rate of 37 per 1,000 population to 35 per 1,000 the end of 1970. In fact it was lowered to 33 per 1,000 and the Second Malaysia Plan (1971-1975), the objective of the programme was to bring it down further to 30 per 1,000 by 1975. Findings from the Malaysia Fertility and Family Survey (MFFS) conducted jointly by the Department of Statistics and NFPB in 1974, indicated that the programme had achieved 60 per cent of the targetted number of acceptors.

Under the Third Malaysia Plan (1976-1980), the programme aimed to bring down the birth rate from about 31 per 1,000 population in 1975 to 28.2 per 1,000 in 1980. This called for the recruitment of at least 817,963 new acceptors both from programme and non-programmes sources. During this period, the programme recruited 538,761 new acceptors, 66 per cent of the target for that period (table 85).

Table 86 indicates targets and achievements of the programme for five-year plans 1966-1985. In 1979, the achieved birth rate was 29.5 per 1,000 which was not in line with expectations.

Table 85. Family planning acceptors, target and
achievement, Peninsular Malaysia,
1976-1980

	Number	Per cent
Target	817 963	100
Achievement		
Programme sources (NFPB and other implementing agencies)	404 071	49
Non-programme sources	134 690	16
Total	538 761	66

Source: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982).

Fourth Malaysia Plan (1981-1985)

The distribution of acceptors according to implementation agency indicated that the yearly performance of NFPB is slowly declining, accounting for about 47 per cent of acceptors recruited in 1983, compared with 49 per cent in 1980 (table 87). A similar trend is also noted in the performance of state FPA programmes, which declined from 16 per cent of all new acceptors in 1980 to 15 per cent in 1983. This was the result of the limited post-partum programme and little real growth in the number of service outlets in urban areas, which are the main concentrations of NFPB.

More than 25 per cent of eligible couples in urban areas use non-programme sources (from private doctors, drug stores and so on). Thus, it is clear that services in urban areas have to be stepped up and improved by NFPB. The per cent share in total acceptors using the facilities of the Ministry of Health "Integration" dropped gradually until 1976, after which there was an increase until 1983. This increase can be attributed in large part to greater participation in Integration programmes among the rural population.

2. Urban and rural acceptance

The greatest contribution of the national family planning programme is in terms of its impact in rural areas which can be seen from table 88.

The percentage of acceptors from rural areas has been much higher than that from urban areas, for example, 73 and 27 respectively, in 1983. Owing to lack of facilities in their own localities, some rural couples came to urban clinics, since 73

28.2-26.0

. . .

	New acceptors			Birth	Birth rate		
Period		Achiev	vement	Target	Achievement		
_	Target	Number	Per cent	(beginning-end)			
First Malaysia Plan (1966-1970)	343 350	273 720	80	37.3-35.0	32.5		
Second Malaysia Plan (1971-1975)	535 000	433 400	81	33.0-30.0	30.3		
Third Malaysia Plan (1976-1980)	817 963	538 761	65.9	31.0-28.0	31.7		

Table 86. Acceptors, birth target and achievement by planned period, Peninsular Malaysia, 1966-1985

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), except for:

. . .

731 950

Figure for achievement of third plan is crude birth rate, from Malaysia, Annual Statistical Bulletin Malaysia, (Kuala Lumpur, Department of Statistics, 1982).

Year	Per cent share in total acceptors										
	NFPB ^a	FPA ^b	Estate ^C	FELDA ^d	Integration ^e	TBA ^f	Others	Total			
1972	66.0	24.1	1.2	2.0	5.4	_	1.3	100.0			
1974	59.4	20.1	0.7	3.4	12.0	3.8	0.6	100.0			
1976	47.9	15.3	0.2	2.2	30.4	3.8	0.2	100.0			
1978	48.9	14.2	0.2	2.1	32.7	1.6	0.3	100.0			
1980	48.9	15.8	0.1	2.2	31.7	1.0	0.3	100.0			
1982	48.3	14.8	0.3	2.6	32.5	0.7	0.8	100.0			
1983	47.1	15.1	0.1	3.0	33.9	0.3	0.5	100.0			
All	52.3	17.0	0.4	2.5	25.5	1.8	0.5	100.0			

Table 87. Distribution of new acceptors by implementation agency, Peninsular Malaysia, 1972-1983

Source: National Family Planning Board, 1984.

^a National Family Planning Board.

- ^b State Family Planning Association programmes.
- c Rural plantations.
- ^d Federal Land Development Scheme.
- ^e Programmes of Ministry of Health.

f Traditional birth attendants.

Table 88. Percentage distribution of acceptors by location of clinic and residence of acceptor,
Peninsular Malaysia, 1968-1983

	Clinic lo	cation	Residence of	of acceptors
Year	Urban	Rural	Urban	Rural
1968	70.0	30.0		•••
1974	43.5	565	19.7	80.3
1976	41.1	58.9	19.4	80.6
1978	43.9	56.1	26.9	73.1
1980	46.7	53.3	25.2	74.8
1982	45.9	54.1	25.7	73.4
1983	46.4	53.6	27.0	73.0

Source: National Family Planning Board, 1984.

per cent of all acceptors came from rural areas, but only 54 per cent of all acceptors went to rural clinics.

It has been estimated that 71 per cent of married women of childbearing age live in rural areas. As noted above, Integration programmes have recruited large numbers of acceptors from rural areas. It is also expected that the national programme as a whole has lower impact in urban areas because of the wide range of alternative nonprogramme sources of contraception available there. Preliminary estimates of the 1974 Malaysia Fertility and Family Survey showed that over 40 per cent of urban couples were practising contraception as against 25 per cent of rural couples. Thus, a substantial proportion of the urban couples must be using private or non-programme sources to get contraceptive supplies while the rural couples relied on the national programme as their major source of family planning services.

Moreover, plans were underway to give equal emphasis to urban and rural areas in the future implementation of the national programme. The urban improvement programme has been implemented in four phases between 1976 and 1979, starting with the metropolitan areas of Kuala Lumpur, Penang and Ipoh, where greater emphasis was given to the underprivileged sector of the population. Under this programme, a great proportion of the urban population utilized the family planning services offered through the Board and FPA clinics.

3. Trends in knowledge, attitude and practice

The decline in the Malaysian birth rate after 1967 has been attributed in major part to the increased use of contraception. The findings of six important surveys conducted in Peninsular Malaysia provide a measure of changes in knowledge of, attitudes towards and practices of contraception during the first 13 years of the national family planning programme. Some selected figures from these surveys are shown in table 89.

The table shows that there has been a significant increase in knowledge of family planning, especially in the rural sector. The knowledge of family planning became almost universal after the implementation of the NFPB programme. Moreover, the proportions of those who have ever used and who are currently using contraception have increased markedly.

Table	89 .	Trends in family planning knowledge, attitudes and practices according to
		Malaysian surveys 1966/67-1979

<u> </u>			Currently ma	rried women		
Family planning knowledge, attitudes and practices	West Malaysian Family Survey 1966/67	PES-KAP ^a 1970	MFFS ^b 1974/75	1st IIDA FHS 1976 (Rural)	KL/PJ FHS 1977 (Urban)	2nd IIDA FHS 1979 (Rural)
Per cent who approved of family planning	70	78		90	89	83
Per cent who had knowledge of family planning	44	85	92	79	99	92
Per cent who had _o ever used contraception	14	27	53	49	75	62
Per cent who were currently using contraception	8	16	36	32	59	39

Source: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982, p. 153).

- ^a Census Post Enumeration Survey-Knowledge, Attitude, Practice.
- ^b Malaysian Fertility and Family Survey.

4. Trends in characteristics of family planning acceptors

(a) Age of acceptor

From table 90, it can be seen that the age of new acceptors is growing younger, and it is through younger acceptors that the family planning programme is likely to have its greatest impact on fertility. Between 1968 and 1983, the percentage of acceptors aged 15-24 years increased from 26.6 to 42.2. By 1983, over 70 per cent of all new acceptors were under age 30.

(b) Spacing of children

Table 91 implies that acceptors are moving towards lengthier intervals between births. The percentage of acceptors who wanted later to have a first child or another child had increased from 40.8 in 1968 to 78.9 by 1983.

As the programme has been particularly successful at recruiting younger women with fewer children, it is expected that a greater percentage of them would have originally accepted a programme method for the purpose of timing and spacing of childbearing rather than for limiting family size.

Table 92 shows that over the period 1972-1983, the median age of acceptors who wanted a child in the future was considerably lower than the age of those who did not expect to have any more children, that is 25 years as compared to 33 years in 1983. The median age of those who were undecided about another child was between these two extremes over the same period.

Table 93 shows that the median number of living children belonging to acceptors who said that they do not expect to have any more children decreased from 5.5 in 1970 to 3.8 in 1983.

(c) Shorter open interval

The use of contraceptives to maintain the non-pregnant state during the open interval (the period between marriage or last birth and acceptance) has a significant demographic impact since the childbearing rate of women is highest during this period.

Table 94 shows that the median open interval has declined steadily from 5 months in 1971 to 4.2 months in 1983. The percentage of programme acceptors with open intervals of six or fewer months increased from 58.7 per cent in 1971 to 67.2 per cent in 1983, and those with open intervals of 12 or fewer months accounted for 76.2 per cent in 1971 and 82.4 per cent in 1983.

Table 95 shows that over the period 1970-1983, both urban and rural clinics were recruiting acceptors with decreasing median numbers of children; for urban clinics from 2.9 in 1970 to 1.5 in 1983. A similar pattern of reduction is noted

		Year of acceptance							
Age group	1968	1972	1974	1978	1980	1982	1983	women 15-49 1970	
15 - 24	26.6	37.1	41.4	42.5	43.5	43.1	42.2	22.9	
25 - 29	29.4	26.9	27.5	30.1	29.7	30.9	31.5	18.6	
30 - 34	24.5	19.7	16.9	15.4	16.0	16.3	16.7	19.7	
35 - 49	19.5	16.3	14.2	12.0	10.8	9.7	9.6	38,8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Mean age	29.0	27.7	27.0	26.6	26.5	26.4	26.5	21.6	
Median age	29.0	27.4	26.6	26.2	26.1	26.1	26.2		

Table 90. Percentage distribution of family planning programme acceptors by age,Peninsular Malaysia, 1968-1983

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), p. 136.

National Family Planning Board, 1984.

Desire another child		-		Year o	of acceptance			
	1968	1972	1974	1976	1978	1980	1982	1983
Yes, later	40.8	56.5	62.7	68.2	74.0	77.0	77.9	78.9
No, never	50.9	31.3	26.6	21.4	18.6	16.7	16.0	15.3
Undecided	8.3	12.2	10.7	10.4	7.4	6.3	5.3	5.0
Not reported		_	-	_	_	-	0.8	0.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 91. Percentage distribution of acceptors by desire for another child,
Peninsular Malaysia, 1968-1983

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala-Lumpur, National Family Planning Board), p. 139.

National Family Planning Board, 1984.

Table 92. Median age of acceptors among women who want another child,
Peninsular Malaysia, 1972-1983

			(Years)				
Desire another child				Year of accep	tance		
	1972	1974	1976	1978	1980	1982	1983
Yes, later	24.2	24.2	20.9	24.6	24.6	24.7	24.7
No, never	33.5	33.2	33.4	33,3	33.4	33.3	33.3
Undecided	29.0	28.2	25.6	28.8	29.1	28.7	28.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982), p. 139.

National Family Planning Board, 1984.

Table 93. Median number of living children belonging to women who want another child,Peninsular Malaysia, 1970-1983

Desire				Year of a	cceptance			-
child	1970	1972	1974	1976	1978	1980	1982	1983
Yes, later	1.6	1.4	1.3	1.2	1.1	1.1	1.1	1.1
No, never	5.5	5.4	5.1	4. 8 [.]	4.3	4.0	3.8	3.8
Undecided	3.5	3.6	3.1	2.9	3.0	2.8	2.7	2.6

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme, (Kuala Lumpur, National Family Planning Board, 1982), p. 140.

National Family Planning Board, 1984.

Open interval in months				Year of a	cceptance			
	1971	1972	1974	1976	1978	1980	1982	1983
0 - 2	25.5	25.9	26.7	26.7	26.5	27.2	28.7	28.8
3 - 6	33.2	32.1	35.0	36.9	36.0	35.8	38.5	38.4
7 - 12	17.5	18.4	16.9	15.6	15.7	15.4	14.7	15.2
13 - 99	23.8	23.6	21.4	20.8	21.8	21.6	18.7	17.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median open interval	5.0	6.0	5.7	5.0	3.6	4.6	4.3	4.2

Table 94. Open interval of acceptance by year, Peninsular Malaysia, 1971-1983(Per cent)

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme, (Kuala Lumpur, National Family Planning Board, 1982), p. 138.

National Family Planning Board, 1984.

for urban and rural acceptors, with the urban acceptors having slightly smaller numbers of living children compared with rural acceptors.

The family planning programme is designed in particular to provide contraceptive services to the less educated and more disadvantaged in order to lower their family size, thereby improving their socio-economic well being. Table 96 shows that in 1972, 85 per cent of acceptors had not completed

Table 95. Median number of living children of
acceptors, Peninsular Malaysia, 1970-
1983

	Clinic le	ocation	Residence of	acceptors
Year	Urban	Rural	Urban	Rural
1970	2.9	3.4	• • •	• • •
1972	2.4	2.9	• • •	•••
1974	2.0	2.3	1.6	2.4
1976	1.7	2.0	1.4	2.0
1978	1.6	1.7	1.4	1.8
1980	1.5	1.6	1.3	1.6
1982	1.5	1.4	1.3	1.5
1983	1.5	1.4	1.4	1.5

Source: National Family Planning Board, 1984.

any education or had completed only the primary level, compared with 57 per cent in 1983. This large decrease is due to increasingly smaller proportions of acceptors falling into these categories as a result of the spread of education in the country.

(d) Method accepted

The contraceptive pill is the mainstay of the Malaysian family planning programme, with 70 per cent of acceptors using it over the 12-year period shown in table 97. Other methods are of less importance, although there has been a progressive increase in the use of the condom and IUD. The lack of facilities and medical personnel for the insertion and maintenance of IUD is one of the reasons why only 5 per cent of acceptors had IUD insertions in 1983. Women seeking IUP insertions also tended to be between 3 and 4 years older on the average than those using the pill (in 1979 the respective median ages were 29.0 years and 25.5 years).

E. THE IMPACT OF FAMILY PLANNING ON POPULATION GROWTH

The service component of the national family planning programme began operations in May 1967, 1968 being the first full year when family planning services were implemented. The crude birth rate had already declined from 46 per 1,000 population in 1957 to 35 per 1,000 in 1968,

Year	No schooling	Primary	Secondary and above	Not reported	Total
1972	25.2	59.8	15.0		100.0
1974	21.2	61.2	17.6	_	100.0
1976	16.7	57.0	19.3	7.0	100.0
1978	12.3	56.1	24.0	7.6	100.0
1980	11.6	54.6	31.0	2.8	100.0
1982	9.5	50.8	37.5	2.2	100.0
1983	8.4	48.6	41.3	1.7	100.0

Table 96. Percentage of acceptors by educational level attained,
Peninsular Malaysia, 1972-1983

Scurce: National Family Planning Board, 1984.

Table 97. Percentage distribution of acceptors by method, Peninsular Malaysia, 1972-1983

Year	Pill	Condom	IUD	Other	Sterilization	Total
1972	86.7	3.8	2.0	0.6	6.9	100.0
1974	87.1	4.1	1.3	0.8	6.7	100.0
1976	86.4	5.8	1.4	1.1	5.3	100.0
1978	81.2	9.3	2.1	1.0	6.4	100.0
1980	72.8	15.1	3.6	0.8	7.7	100.0
1982	69.6	16.5	4.9	0.6	8.4	100.0
1983	70.0	14.7	5.2	1.3	8.8	100.0

Source: National Family Planning Board, 1984.

while in the following five years, the total decline was 13.3 per cent, or an average annual rate of 2.7 per cent. Table 98 shows that the crude birth rate for Peninsular Malaysia declined from 40.9 per 1,000 in 1960 to 30.6 per 1,000 in 1982.

Over the period 1967-1974, the percentage of women currently married in different age groups declined slowly, compared with the period 1957-1967. Secondly, trends in the age distribution over the period 1967-1973 favoured an increase in the crude birth rate. Specifically, the proportion of females aged 15-44 in the total population, which varied from 19.5 to 19.8 per cent during the period 1958-1967, increased to 20.5 per cent in 1970 and 21.4 per cent in 1973.⁶ If changes in the

Table 98. Crude birth rate, Peninsular Malaysia, 1960-1982 (Per 1,000 population)

Year	Crude birth rate
1960	40.9
1965	36.7
1970	32.5
1975	30.3
1980	30.3
1982	30.6

Source: Malaysia, Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1975).

Malaysia, Monthly Statistical Bulletin, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, June 1984).

⁶ Calculated from Charles Hirshman, Estimates of the Intercensal Population by Sex, Community and Age Group, Peninsular Malaysia: 1957-1970 (Department of Statistics, 1974); and Malaysia, Vital Statistics for Peninsular Malaysia (Kuala Lumpur, Department of Statistics, various years).

proportion of females in child-bearing ages and in the proportion married, have favoured an increase in the crude birth rate, then a significant decline in the crude birth rate after the programme had started may be attributed to changes in marital fertility which could only have occurred through a greater degree of contraceptive practice by the population. The decline in the crude birth rate was brought about mainly by family planning programmes, according to the findings of the first Malaysian Family Survey 1966/67, the Census Post-Enumeration Survey of 1970 and the Malaysian Fertility and Family Survey (MFFS) 1974. which provided measures of change in family planning knowledge, attitude and practice during the first 8-9 years of the programme.

There was relatively little change in the proportion of the population in urban areas over the period 1957-1970 (26.5 and 34.7 per cent respectively). Cho⁷ has estimated that the total fertility rate in rural areas declined by only 10 per cent over the period 1958-1967, while the corresponding decline in urban areas was as high as 31 per cent. The greater decline in fertility rate between 1967 and 1970 and perhaps between 1970-1973 could not therefore be associated with a higher degree of urbanization. Most of the greater declines in fertility in rural areas after 1967, was obtained through the programme.

An analysis of the age-specific and total fertility rates between 1960 and 1982 indicates a

higher decline in the rate of fertility between 1970 and 1982 than between 1960 and 1965 (table 99).

F. COUPLE-YEARS OF PROTECTION ACHIEVED

The achievement index of couple-years of protection (CYP) is a measure of the output of a family planning programme in terms of the time period of contraceptive protection provided currently or in the future resulting from efforts made during a particular year. The index provides a means of comparing and summing the protection afforded by different contraceptive methods in terms of total time during which each method conferred protection on a couple.⁸

Table 100 shows couple-years of protection generated by the various contraceptive methods provided by the national family planning programme for the period 1968-1975. Total CYP has increased from 98,848 in 1968 to 240,281 in 1975, an average rate of 20 per cent per year. Oral contraceptives have continued to contribute the highest percentage of CYP achieved, while sterilization ranks second for the period. The other methods made only marginal contributions.

The protection prevalence ratio, which refers to the proportion of all married women of reproductive age who are currently protected by the programme, has increased from 8 per cent in 1968

Year 1960 1965 1970	Total fertility		Age-specific fertility rate (ASFR)							
	per woman	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
1960	6.2	125	278	323	257	154	85	19		
1965	5.6	83	265	292	241	157	65	21		
1970	4.9	54	226	265	219	140	56	13		
1975	4.1	46	186	238	183	123	46	7		
1980	4.0	36	185	245	185	108	42	5		
1982	3.8	31	170	231	181	111	40	5		

Table 99. Age-specific and total fertility rate, Peninsular Malaysia, 1960-1982

Sources: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme, (Kuala Lumpur, National Family Planning Board, 1982), p. 32.

National Family Planning Board, 1984.

⁷ L. Cho, J.A. Palmore and L. Saunders, "Recent fertility trends in West Malaysia", *Demography*, vol. 5, No. 2 (1968).

⁸ S.M. Wishik and K.H. Chen, *Couple-Year of Protection: A Measure of Family Planning Programme Output*, Manual No. 7 (New York, Columbia University International Institute for the Study of Human Reproduction, 1973).

	All methods		T. + 11	a	<u> </u>	
Year	Number	Per cent	Pill	Sterilization	Condom	
1968	98 848	100	72	24	1	3
1970	133 819	100	74	23	1	2
1972	160 581	100	70	25	2	2
1974	217 021	100	73	23	3	1
1975	240 281	100	75	20	3	.1

Table 100. Percentage distribution of couple-years of protection achieved by methodand year, Peninsular Malaysia, 1968-1975

Source: Calculated from data in table 97 according to methods of S.M. Wishik and K.L. Chen, Couple Year of Protection: a Measure of Family Planning Programme Output, Manual No. 7 (New York, Columbia University International Institute for the Study of Human Reproduction, 1973).

to 16 per cent in 1975 (table 101). In particular, 16 per cent of eligible couples were protected for the whole year through the national family planning programme in 1975.

G. CONCLUSIONS

The main findings of the Peninsular Malaysia national family planning programme have been:

(a) a higher decline in birth rate was observed after the programme had started;

(b) the decline in fertility rates during the period 1967-1974 was mainly due to declines in marital fertility;

(c) Malaysian women have more favourable attitudes towards family planning than earlier;

(d) the level of family planning knowledge has increased remarkably;

(e) the proportion of contraceptive users has increased significantly from 14 per cent in 1966/67 to 27 per cent in 1970 and 48 per cent in 1974; and the percentage of those currently using contraceptives has increased from 8 to 16 per cent and to 36 per cent over the same periods;

(f) couples are adopting contraception at younger ages and with lower parity;

(g) the open interval of programme acceptors is decreasing;

(h) the national family planning programme has provided new outlets for family planning services, especially to those residing in rural and underpriviledged urban areas;

(i) the programme has been able to attract less-educated women and women with lower incomes.

There have also been social and economic changes in this country over the past several years. The relationships among social and economic development, family planning programmes and changes in fertility levels remain unclear. Nevertheless these factors have contributed to large numbers of family planning acceptors and continuing users, leading to reductions in fertility.

H. POSTSCRIPT

In 1982, Prime Minister Datuk Seri Dr. Mahathir Mohamad announced at the General Assembly of UMNO that Malaysia could support a

lable	101.	Couple-	year of	protection	prevalence	ratio,	Peninsular	Malaysia,	1968-1975
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Year	1968	1970	1972	1974	1975
CYP prevalence ratio	0.08	0.10	0.12	0.15	0.16

Source: Same as for table 100.

larger population of up to 70 million.⁹ Since this announcement, there has been much official rethinking of Malaysian population policies. This has resulted in a New Population Policy which states, "Recognising that a large population constitutes an important human resource to generate and support industrial growth through productive exploitation of national resources, Malaysia could, therefore, plan for a larger population which could ultimately reach 70 million. The experience of some countries of similar size to Malaysia has shown that a larger population is not necessary a liability if the population is provided with skills that can be effectively and productively utilized for national development".¹⁰ This new policy is in contrast to the previous population policy which sought to reduce the population growth rate to 2 per cent per annum by 1985.

In pursuance of the New Population Policy, an Ad-Hoc Committee on Population Issues was formed (headed by the Chairman of NFPB) to examine the feasibility of attaining the population target of 70 million. The Ad-Hoc Committee came up with a recommendation, which was subsequently accepted by the Government, that a population of 70 million could be achieved by the year 2100 if the total fertility rate were allowed to decline from the present level of 3.7 children per woman by 0.1 point every 5 years until it reached replacement value.¹¹

To bring a greater degree of consistency between the aims of NFPB and those of the New Population Policy, the name of the former was changed to the National Population and Family Development Board in April 1984. Since the New Population Policy is premised on an economically productive population, the major emphasis of the Population Board will be towards spacing of children to enhance family welfare and health.

⁹ The Star (Petaling Jaya), 11 September 1982.

¹⁰ Malaysia, Mid-Term Review of the Fourth Malaysia Plan, 1981-1985 (Kuala Lumpur, Government Printer, 1980).

¹¹ Ibid.

VIII. TRENDS IN MARRIAGE AND DIVORCE IN PENINSULAR MALAYSIA*

INTRODUCTION

Basic and far-reaching social and economic changes have occurred in Peninsular Malaysia since it achieved independence in $1957.^1$ Real per capita GDP rose from \$M766 in 1957 to \$M1,209 in 1971^2 and has risen further since; the proportion of the population in cities and working in manufacturing and service industries has increased, and levels of education and health have risen sharply. The birth rate has fallen, and fertility levels prevailing in 1973, if continued unchanged, will result in an average of 4.4 births per woman instead of the 6.7 implied by the fertility levels of 1957.

Some of the sharpest social changes have been in marriage, both in the age at which people marry and the extent to which marriage ends in widowhood and divorce. Since little has been written on this subject, it is the purpose of this chapter to outline the main trends and to venture some explanations for them. The main emphasis will be on trends in the politically-dominant Malay community, which in 1970 constituted 53.1 per cent of the population of Peninsular Malaysia, because changes in marriage and divorce in this group have been the most dramatic of all, and probably the most far-reaching in their consequences.

A. AGE AT MARRIAGE

The median age at first marriage in Peninsular Malaysia has risen sharply in the past 30 years for females of all races. The timing of change however, has differed among ethnic groups (see tables

102 and 103). For Chinese the median age at marriage was already moderately high (20.2 years) in 1947. Even so, the percentage of Chinese women remaining single in their early twenties rose sharply in the decade up to 1957, by which time the difference between the races in median age at marriage for females had reached its peak. After 1957, median age at marriage for Chinese continued to rise steadily, but appears to have levelled off since 1970,³ whereas median age at marriage for both Malays and Indians (barely above 17 in 1957) has risen sharply since that time and appears to be still rising. Though the 1960s brought a sharp rise in the proportion of young Malay and Indian women remaining single, by 1970 this proportion was still not as high as it was among Chinese as early as 1957. The gap between the races in female median age at marriage has narrowed further in the 1970s, but a difference of more than two years remains between Chinese and Malays; Malay age at marriage in 1974 was still slightly lower than that reached by Chinese as early as 1957.

Trends for males are less clear-cut, largely because a shortage of females in the marriageable age groups still persisted in the immigrant Chinese and Indian communities in 1947, thus artificially raising the male age at marriage and preventing many males from marrying at all.⁴ However, since 1957, median age at marriage has risen for males of all races, though less rapidly than it has for females, with the result that for each race, the male-female differential in age at marriage had narrowed to 3 or 4 years by 1970 and 1974.

The median age at marriage for females as a whole in West Malaysia has not reached the levels attained in Sri Lanka (26 years), or apparently in

^{*} Contributed by Gavin W. Jones, Australian National University. This chapter has been previously published in *Population Studies*, vol. 34, No. 2, July-1980. Permission by the publishers to reprint it in this monograph is gratefully acknowledged.

¹ Peninsular Malaysia at that time was called the Federation of Malaya. Since 1963, it has been part of Malaysia, which includes as well the former British colonies of Sabah and Sarawak. This chapter deals only with Peninsular Malaysia.

² U.V. Bhanoji Rao, National Accounts of West Malaysia 1947-1971 (Singapore, Heinemann, 1976), table D, p. 102.

³ Since census data are available only for 1957 and 1970, it is impossible to tell exactly when the age at marriage levelled off. In any case, trends in median age at marriage give only a very imprecise picture of cohort trends in a period of rapid change in age at marriage.

⁴ In 1947, almost 15 per cent of Indian males and 21 per cent of Chinese males aged in their 50s were still single, compared with only 2 per cent of Malay males in the same age group.

27		Female						
Y ear	Malay	Chinese	Indian	All groups ^a	Malay	Chinese	Indian	All groups ^a
1947	22.9	25.0	26.8	24.0	16.6	20.2	17.1	18.2
1957	22.1	25.3	24.4	23.1	17.1	21.6	17.2	19.0
1970	24.4	26.6	25.2	25.3	20.5	23.6	21.0	21.4
1974	25.2	27.0	26.1	• • •	21.4	23.8	22.0	•••
1974 ^b	25.2	26.9	25.0 ^c		21.0	23.1	22.7	•••

Table 102. Median age at first marriage by community group, Peninsular Malaysia,1947, 1957, 1970 and 1974

Sources: 1947, 1957 and 1970 population censuses.

1974 Malaysian Fertility and Family Survey, unpublished data.

Note: Calculated according to the indirect method, using marital status by 5-year age groups and linear interpolation. See Shryock and Siegel, The Methods and Materials of Demography (Washington D.C., Government Printing, 1971), pp. 292-293.

^a Including a small group of "other races".

^b Calculated using data on marital status by single years of age.

^c Somewhat misleading, because the per cent single drops below 50 in the 25-year age group, rises above 50 again in the 26-year age group then drops sharply again at age 27. Based on only 34 cases aged 24 and 34 cases aged 25.

Community and indicator	1947	1957	1970	1974
Malay				
Percentage single at age 15-19	40.8	45.9	77.3	83.3
Percentage single at age 20-24	6.6	9.4	32.4	40.4
Percentage never marrying ^a	1.4	0.6	0.7	-
Median age at marriage	16.6	17.1	20.5	21.4
Chinese				
Percentage single at age 15-19	82.4	89.7	94.0	94.6
Percentage single at age 20-24	26.1	43.1	59.7	57.6
Percentage never marrying ^a	3.7	2.5	2.4	1.8
Median age at marriage	20.2	21.6	23.6	23.8
Indian				
Percentage single at age 15-19	47.7	46.8	83.0	9.2.3
Percentage single at age 20-24	6.9	9.4	37.0	45.0
Percentage never marrying ^a	1.6	0.6	0.9	_b
Median age at marriage	17.1	17.2	21.0	22.0

Table 103. Indicators of trends in marriage timing and non-marriage of femalesby community group, Peninsular Malaysia, 1947-1970

Sources: 1947, 1957 and 1970 population censuses.

1974 Malaysian Fertility and Family Survey.

^a Percentage still single among women aged 45-49.

^b At age 50-54, 1.4 per cent had never married.

China. Nevertheless the rise in age at marriage, one of the sharpest in the world in recent decades, has been very important both in lowering birth rates and in altering (and reflecting altered) ways of life. Two thirds of the decline in fertility up to 1970 is attributable to the decline in proportions married. Proportions vary for the different communities, with marital structure accounting for almost all of the decline in the birth rate for Malays and for a little over half of the decline for Chinese.⁵

It is not vet clear whether the rising proportion of women remaining single in their early twenties has been accompanied by a tendency for more women not to marry at all. The percentage still single at age 45-49 (a proxy for non-marriage) actually fell for each community between 1947 and 1957, and in 1970 and 1974 remained very low indeed for all communities. However, these figures still reflect the marital history of earlier generations, and only in 1980 will it be possible to detect whether the rising proportions single at younger ages during the 1960s represented merely a shift in timing of marriage or reflected as well as growing tendency for women not to marry at all. There are already some signs that the rising age at marriage in the 1960s was accompanied by a trend towards more women remaining unmarried: in 1974, 5 per cent of Malay women aged 30-34 and almost 7 per cent of Chinese women aged 35-39 were still unmarried. Both proportions were much higher than in previous years. It is not unlikely that many of these women will complete their reproductive period without marrying.

B. POSSIBLE REASONS FOR CHANGING AGE AT MARRIAGE

In attempting to explain why the age at first marriage for females has risen so sharply, it is worth bearing in mind the following three preconditions for significant change; which may occur separately or together: (a) change in social norms about age at marriage; (b) the development of wide-spread and compelling economic reasons for changing marriage patterns; (c) a growing shortage of desirable mates at the traditionally sanctioned ages of marriage, owing to changing population structure and perhaps to changing characteristics of unmarried women (increased education, etc.). This in turn would alter the mix of characteristics required of the pool of potential husbands, even if traditional norms were not changing.⁶

1. Marriage squeeze

The most directly measurable of these possible influences is the demographic phenomenon of "marriage squeeze". Caldwell, in a paper published in 1963,⁷ examined the changing demographic structure of the population of Peninsular Malaysia (including Singapore). Since the average difference in age between spouses was fairly close to five years for each ethnic group, he studied the sex ratios of males in any given adult age group to females five years younger. His main conclusion was that perpetuation of a pattern of early and universal marriage for females of each racial group, despite a difference of from $4\frac{1}{2}$ to 8 years in the average ages of husbands and wives, had been possible in a rapidly growing population only because of the availability of large number of older, single immigrant men in the Chinese and Indian communities and the prevalence of polygyny and easy divorce in the Malay community.⁸ Nevertheless, a growing shortage of males in the appropriate marriageable ages was almost certainly partly responsible for the sharp rise in average age at marriage for Chinese females, and population projections indicated that the marriage squeeze was likely to become more pressing for the Indian and Malay communities in the years ahead. Given these trends, as Caldwell notes, something would have to give: women would have to marry at older ages, husbands at younger ages, or the incidence of polygyny and unstable marriage would have to increase.

⁵ Lee-Jay Cho and Robert D. Retherford, "Comparative analysis of recent fertility trends in east Asia", in International Union for the Scientitic Study of Population (IUSSP), *International Population Conference*, Liège, 1973, vol. 2 (Liege, IUSSP, 1974).

⁶ See M. Badrud Duza and C. Stephen Baldwin, *Nuptiality and Population Policy* (New York, The Population Council, 1977), p. 58;

Ruth B. Dixon, "The social and demographic determinants of marital postponement and celibacy: a comparative study" (unpublished Ph.D. dissertation, University of California, Berkeley, 1970).

⁷ J.C. Caldwell, "Fertility decline and female changes of marriage in Malaya", *Population Studies*, vol. 17, No. 1 (1963).

⁸ As Caldwell has noted, the median age at marriage for males fell between 1947 and 1957, while that for females rose, thus narrowing the age difference between spouses in the way expected in a marriage squeeze situation.

The probable effect of marriage squeeze between 1957 and 1970 for each community in Peninsular Malaysia may be projected into the future. This is reasonable as there is still very little inter-ethnic marriage in Malaysia.⁹ Neither is there much intermarriage between Malaysians and Singaporeans, or between Peninsular Malaysians and persons from Sabah or Sarawak, because there is little population movement between the two regions.

Table 104 shows the sex ratios of males to females five years younger than themselves. Digital preference in age statement produced an undulating movement in these ratios, and this was largely smoothed by computing moving averages for each set of three adjacent groups. The five-year age difference was maintained despite the fact that the actual age differences between spouses for each community have narrowed since 1957 (see table 105). This is because one of the objects of the exercise is to highlight the implications of maintaining a wide difference in ages between spouses; a narrowing of the age range probably reflects in fact an adjustment to the strains revealed by the table.

Trends in ratios at ages where nuptiality is high have differed for each community. For Chinese, there was actually a rise between 1957

Table105.Difference between male and female
median ages at marriage by commu-
nity, Peninsular Malaysia, 1957 and
1970

(years)

Year	Malay	Chinese	Indian
1957	5.0	3.7	7.2
1970	3.9	3.0	4.2
1974	3.8	3.2	4.1

Sources: 1957 and 1970 population censuses.

1974 Malaysian Fertility and Family Survey, unpublished data.

Age of	Malay				Chinese			Indian		
female group	1957	1970	1980	1957	1970	1980	1957	Indian 1970 84.6 73.7 77.1 84.8 102.9 109.6	1980	
10 - 14	79.3	79.8	101.4	85.7	87.2	113.0	84.4	84.6	115.1	
15 - 19	81.6	74.2	86.6	84.8	79.8	96.1	107.5	73.7	96.0	
20 - 24	78.9	76.4	78.8	76.2	80.4	85.6	114.8	77.1	80.1	
25 - 29	80.8	77.3	71.9	76.6	81.8	75.8	133.2	84.8	73.9	
30 - 34	81.9	83.9	70.9	83.3	83.5	74.9	152.5	102.9	62.0	
35 - 39	84.4	79.3	92.7	100.1	74.1	94.4	173.4	109.6	107.1	
40 - 44	85.3	84.2	70.0	109.3	74.8	75.6	173.3	125.0	93.8	
15 - 29	78.9	76.4	80.0	76.2	80.4	86.6	114.8	77.1	84.4	

Table 104. Sex ratios of male age groups to female age groups five years younger, Peninsular Malaysia,1957, 1970 and (projected) 1980 (males per hundred females)

Sources: 1957, 1970 population censuses. Department of Statistics, Population Projections, Malaysia, 1970-1990 (Kuala Lumpur, 1974), projection c.

Note: 1957 and 1970 figures moving averages of three adjacent groups.

⁹ No definitive study has yet been conducted on interethnic marriage in Malaysia. In neighbouring Singapore, however, interethnic marriages constituted 5 per cent of all marriages registered over the years 1962-1970. In the late 1960s, the main groups intermarrying were Indians with Malays, followed by Chinese with ethnic-Europeans, then Chinese with Malays and Chinese with Eurasians [Riaz Hassan, Inter-ethnic Marriage in Singapore: A Study in Inter-ethnic Relations, Occasional Paper No. 21, (Singapore, Institute of Southeast Asian Studies, May 1974), tables 2.2 and 3.1]. Eurasians and "others" had the highest out-marriage rates, followed by Indians (including Pakistanis) and ethnic-Europeans [Riaz Hassan and Geoffrey Benjamin, "Ethnic outmarriage rates in Singapore: the influence of traditional sociocultural organization" in David J. Banks, ed., Changing Identities in Modern Southeast Asia (The Hague, Mouton Publishers, 1976), pp. 114-115]. Given the insignificant proportions of Eurasians, ethnic-Europeans and "others" in Peninsular Malaysia, and the more rural nature of the society, it is unlikely that the rate of ethnic intermarriage is as high as it is in Singapore.

and 1970, whereas for Indians and Malays the potential stock of bridegrooms dropped relative to the number of young women. The Marriage squeeze had grown particularly acute for Indians by 1970, especially when compared with the glut of potential husbands still apparent in 1957. This helps to explain the sharp rise in age at marriage for Indian females over the period. There was no downward adjustment at all in age at marriage of Indian males in response to these drastically altered conditions, perhaps partly because of the difficult economic conditions faced by the Indian population by 1970 and the especially high unemployment rate for Indian males.¹⁰ However, the gap in average age at marriage between males and females narrowed considerably.

In the Malay community, the relatively availability of marriage partners continued to be such that the Malay traditions of a wide age difference between spouses and young and universal female marriage could be maintained only by perpetuation of the older Malay traditions of relatively wide-spread polygyny and easy divorce. Indeed, a tightening of the marriage squeeze in the main female marrying ages, 15-19 and 20-24, implied that polygyny would need to increase and divorce become even easier if the other traditions were to be maintained.

In the event however, the period 1957-1970 witnessed a dramatic decline in both polygyny and divorce in the Malay community. With the closing of these escape valves the only remaining adjustments to the marriage squeeze which could leave intact the tradition of universal female marriage, were a narrowing of the age difference between spouses and a rise in female age at marriage. Both these adjustments in fact occurred, although the key mechanism was the rise in age. The median age at marriage for males not only did not decline, but actually increased by more than two years between 1957 and 1970, and the narrowing of the age differential between husband and wife was due solely to the even more rapid rise in female age at marriage.

Comparison of the 1970 and 1980 columns in table 104 demonstrates clearly that the fertility decline in Malaysia, which began around 1957, is beginning to increase the sex ratios in the younger female ages compared with males five years older. In other words, to the extent that the marriage squeeze has contributed to the rise in female age at marriage, it has now run its course, and in the late 1970s and 1980s will exert no further upward pressure on female age at marriage. Indeed, the apparent levelling off of age at marriage for Chinese females from 1970 to 1974 might be attributed to the improvement in the marriage market for younger Chinese women. If this argument is used for the Chinese however, it still must be explained why age at marriage for Malay and Indian women, who were also seeing similar changes in the marriage market, continued to rise.

In summary, the marriage squeeze has undoubtedly contributed to the rise in age at marriage for Malay and Indian females since 1957. Its effect however, should not be exaggerated. The rise in age at marriage for men as well as women during this period indicates that the main reasons in the case of women must have been changes in norms about the suitable age at marriage, which were no doubt linked to fundamental social and economic changes taking place in Malaysia since independence.

2. Social and economic change

The causal mechanisms by which social and economic changes have influenced age at marriage have not been widely studied¹¹ and any attempt at identifying them must remain speculative. No doubt a major factor has been changing educational policies which have resulted in much higher proportions of young people staying on through

¹⁰ At the 1970 census, the unemployment rate was 7.4 per cent for the Indian male labour force, compared with only 3.9 per cent among Malays and 3.2 per cent among Chinese. Other sources show even higher rates for Indians of both sexes in 1970 (11.0 per cent), rising to 12.2 per cent in 1975, a rate more than 70 per cent higher than the rate for Malays and Chinese in the same year [(Malaysia, *Third Malaysia Plan, 1976-1980* (Kuala Lumpur, Government Press, 1976), p. 143].

¹¹ Some useful attempts have been made to explain differences in age at marriage in the 1966/67 West Malaysia Family Survey, using a battery of socio-economic explanatory variables [James A. Palmore and Ariffin bin Marzuki, "Marriage patterns and cumulative fertility in West Malaysia, 1966-1967", Demography, vol. 6, No. 4 (1969); Barbara R. Von Elm, "Determinants of age at first marriage: a study of West Malaysia", paper presented at the Annual Meeting of the Population Association of America, April 1978]. Not surprisingly, ethnicity is the most important explanatory variable; secondary education and urban residence appear to be important for all races; and for the more urbanized Chinese, pre-marital work. experience is critical as well. Similar studies have not yet been conducted for the 1974 Malaysian Fertility and Family Survey. The most important need, of course, is to explain the dynamics of change, rather than showing only differentials at one point in time.

high school and into institutions of higher learning.¹² The changes have been most dramatic of all for Malays, especially Malay women. In 1972, 62 per cent of Malay youth aged 13 and above were in school, compared with 61 per cent of Chinese and 53 per cent of Indians:¹³ a remarkable reversal of the educational deprivation faced by the Malays only a decade or two earlier.¹⁴ Similar sharp gains have been made by Malays at the tertiary level of education.

Besides this, job opportunities have been opening up for women in activities as diverse as tobacco grading and processing in rural areas of Kelantan and electronics factories in Petaling Java and Penang. The 1970 census shows a higher proportion of women working than in 1957, and although changing reference periods make the comparison suspect, the indicated rise in female employment in non-agricultural activities, from 120,000 in 1957 (6 per cent of all women aged 10 and above) to 306,000 in 1970 (10 per cent of all women aged 10 and above) is no doubt real enough. Urbanization and factory employment have been particularly important for Malay women, partly because of new opportunities opened up for Malays through the New Economic Policy of the Government.

Changing attitudes and norms which have accompanied these sweeping economic and social changes are no doubt equally important, though little has been done to measure them. The Malaylanguage newspapers and magazines no doubt reflect the ambivalent attitudes prevailing in the Malay community when they both welcome the heightened prosperity of the Malay middle classes and warn against the erosion of traditional values. There is no doubt that the move from a sheltered kampong upbringing, which traditionally culminated in an arranged marriage and the raising of a large family,¹⁵ to a tedious job in an electronics factory, board in a working girls' hostel and the uncertainties and temptations of urban life, is a particularly wrenching change for the thousands of Malay women who have made it.¹⁶ The selfimage of these workers is not helped by the widelyheld community beliefs (fuelled by sensational press reporting of partying and prostitution among female factory workers) that they are morally "loose", or by the number of pejorative nicknames used to describe them. The resulting tensions are evidenced by the frequent outbreaks of mass hysteria among young Malay female workers.¹⁷

Finally, there has been the element of ethnic tension and political uncertainty which could well be having profound effects on marriage and reproductive patterns for all communities. In the wake of the race riots of May 1969, measures introduced to preserve Malay political domination and enhance the Malays' economic position opened up new opportunities for Malays in many fields and put strong pressure on the Malay community to seize the opportunities available. At the same time, the Chinese and Indian communities are distinctly uneasy as a result of new educational, language and economic policies.

It is difficult to know how much higher the median age at marriage is likely to rise in Malaysia. The marriage squeeze has run its course, but in any case it was not the main cause of the recent increase in age at marriage. Thus, much will depend on educational and economic changes and

17 For some documentation and evaluation of this phenomenon, see *Asiaweek*, 4 August 1978;

Jamilah Ariffin, "Rural-urban migration and the status of factory women workers in a developing society: a case study of Peninsular Malaysia," Paper presented to the 1978 Conference of the Sociological Association of Australia and New Zealand, 1978;

Susan-Ellen Ackerman, "Mass hysteria and spirit possession in urban Malaysia: a case study", *Journal of Sociology and Psychology*, vol. 1, 1978.

¹² By 1970, nearly all primary school-aged children in Peninsular Malaysia were in school. Secondary school enrolments leaped from 105,000 in 1957 to 505,000 in 1970: an almost five fold increase compared with a 65 per cent increase in the numbers in the 13-19 age group. By 1975, enrolments had reached 773,000: a further 53 per cent increase within five years. [See Chai Hon-chan, *Education and Nation-Building in Plural Societies: The West Malaysian Experience*, Development Studies Centre Monograph No. 6, (Canberra, The Australian National University, 1977), table B, p. 42].

¹³ *Ibid.*, p. 35.

¹⁴ The high enrolment rate for Malays "was probably due to political pressure, the special sponsorship of Malay educational mobility, and rising aspirations" (*ibid.*).

¹⁵ For a good description of the traditional situation, see M. Swift, "Men and women in Malay society", in Barbara E. Ward, ed., *Women in the New Asia* (UNESCO, 1963), see also:

Hashima Roose, "Changes in the position of Malay women" in Barbara E. Ward, op.cit.

¹⁶ Electronics and other factories prefer women to men because of their greater dexterity and docility, Malay women are preferred over Chinese women partly because of government-imposed ethnic quotas in employment and partly because they are believed to be more docile.

other aspects of social change in Malaysia. These are changes which are arguably, but not measurable (or at least not readily so), related to age at first marriage. It is not even entirely clear in which direction such changes will push age at marriage, because it has now reached a level at which forecasting becomes hazardous. Median age at marriage of females in Peninsular Malaysia is now higher than it was in a number of countries (including the United States of America, France and Australia) in the late 1920s.¹⁸ In these highly industrialized countries, age at marriage remained roughly constant or declined in the three decades that followed. Such a trend is not impossible in Peninsular Malaysia. On the other hand, compared with Peninsular Malaysia, age at marriage remains considerably higher in a number of other Western countries, and even in a country as poor as Sri Lanka.

Neighbouring Singapore, a country populated by the same communities as and sharing many common traditions with Malaysia, is a relevant subject for comparison. Singapore's is a metropolitan population further up the development scale than that of Malaysia according to the usual measures. The median age at marriage for females of each race in 1970 had reached levels exceeding those reached in West Malaysia in 1974 by about one year;¹⁹ for Malay and Chinese males as well, the Singapore figures were about one year above the Peninsular Malaysian figures.²⁰ There is no evidence to suggest that median age at marriage had reached its peak in Singapore by 1970.

These comparisons do not provide any clear basis for forecasting future trends in age at marriage in Peninsular Malaysia. All that can be said with confidence is that the trend in female age at first marriage was still upwards in the first half of the 1970s, except in the case of the Chinese, and that the maximum has probably not yet been reached.

C. TRENDS IN DIVORCE AMONG MALAYS

Divorce rates are very low (only 0.02 per thousand in erecent years) among Chinese and Indians in Peninsular Malaysia, and there appears to be little change in these rates over time. The situation for Malays is quite different, and requires more detailed analysis.

The sharp decline in the incidence of divorce among the Malay population is perhaps the most dramatic feature of nuptiality in Malaysia. Malays, particularly those living in the east coast-states of Kelantan and Trengganu, have been characterized by one of the highest rates of divorce, in fact possibly the highest rate of divorce, anywhere in the world.²¹ As recently as 1975, Kelantan's divorce rate was still apparently unmatched anywhere in the world (see table 106).

Data on Moslem divorce in Malaysia are collected state by state, by the Department of Religious Affairs, and are not available in summary form through any national statistical agency. They are therefore not shown in the United Nations *Demographic Yearbook*, which instead presents the relatively uninteresting data on divorce among the non-Moslem population. Because of the difficulty of obtaining data on divorce in Malaysia, neither the exceptionally high divorce rates in earlier years nor the sharp decline in these rates in recent years is widely known.²²

It is clear from the data in table 106 that in parts of Peninsular Malaysia and parts of Indonesia,

¹⁸ See D.J. Bogue, *Principles of Demography* (New York, John Wiley, 1969), table 11-1; and

P.F. McDonald, Marriage in Australia: Age at First Marriage and Proportions Marrying, 1860-1971, Australian Family Formation Project, Monograph No. 2 (Canberra, Department of Demography, Australian National University, 1975), chapter 6.

¹⁹ In the Singapore census report the rising level of education is identified as a variable related to the rising age at marriage, as well as (rather vaguely) "other factors such as increasing employment opportunities and changes in attitudes associated with economic development" [Singapore, *Report on the Census of Population 1970: Singapore* (Department of Statistics, 1973), p. 67].

²⁰ *Ibid.*, table 6.13, p. 59. This table shows mean age at marriage; however, calculation of median age makes little difference.

²¹ This does not necessarily mean that instability of childbearing unions is higher in these states than anywhere else in the world. For example, in the Caribbean, consensual unions predominate in some countries (see G. Mortara, "Les unions consensuelles dans l'Amérique Latine" in *International Population Conference, New York 1961* (IPU). Such unions are very unstable, but divorce statistics do not reveal the extent of instability because a union that is not officially registered can obviously not be officially dissolved.

²² For example, Bogue, op. Cit., states, "at the present time, the United States represents the upper limit in divorce, for divorce rates are higher in the United States than in almost any other nation". In actual fact, at the time he was referring to (around 1965) the divorce rate in Indonesia (even when the non-Moslem population is included) was approximately double that in the United States, and the rates in some of the states of Malaysia were even higher.

	1950	1955	1960	1965	1970	1975
Western countries						
Australia	0.9	0.7	0.7	0.8	1.0	1.3
France	0.9	0.7	0.7	0.7	0.8	1.0
Federal Republic of Germany	1.6	0.9	0.8	0.9	1.2	1.5
United Kingdom (England and Wales)	0.7	0.6	0.5	0.8	1.2	2.1 ^t
United States	2.6	2.3	2.2	2.5	3.5	4.6
USSR		•••	1.3 ^c	1.6	2.6	2.9
18 European and new world countries and areas ^d		•••	0.9	1.0	1.2	1.9
Moslem countries						
Egypt	3.8 ^e	2.5 ^f	2.5	2.2	2.1	2.0 ⁸
Islamic Republic of Iran		1.3 ^f	1.2	1.0	0.6	0.6 ^a
Iraq		0.4 ^f	0.3	0.3	0.4	0.6 ^a
Libyan Arab Jamahiriya			• • •	1.6	2.0	2.0 ^a
Tunisia			0.9 ^c	1.1	0.8	0.9 ^t
Syrian Arab Republic		0.6 ^f	0.8	0.6	0.6	0.6
Turkey		0.4 ^f	0.4	0,4	0.3	
Malay populations						
Brunei Darussalam			• • •	0.5 ^g	0.4	0.5 ^t
Peninsular Malaysia						
Malay population ^h			•••	• • •	3.4	3.1 ^t
Kelantan	26.3	17.0	12.8	9.0	6.9	6.5
Trengganu	18.1	17.8	10.3	7.2	5.1	4.5
Kedah	12.8	9.9 ⁱ	• • •			
Selangor	5.0	4.2 ⁱ	• • •		1.8	1.7 ^t
Malacca	5.7	4.6	3.6	1.4	1.1	0.5 ^t
Johore	3.5	2.2	2.1	1.7	1.5	1.4
Singapore Malay	11.1	7.0	2.6	1.4	0.7	0.9
Indonesia						
Moslem population	9.3	10.2	7.8	6.3 ^j	2.9	2.0 ^a
Java		13.1 ⁱ	•••	8.0	3.9	2.6 ^a
West Java		15.3 ⁱ	• • •	9.9	3.9	3.0 ^a
East Java	• • •	13.6 ⁱ	• • •	7.9	4.4	2.9 ^a
Central Java-Jogjakarta		11.6 ⁱ	• • •	7.2	3.6	2.2 ^a
Outer islands		2.5 ⁱ		2.1	0.7	0.5 ^a

Table 106. Crude divorce rates, various communities, countries and regions, 1950-1975 (per thousand)

Table 106 (continued)

Sources: United Nations Demographic Yearbooks, various years.

Figures for Malay populations computed from data in Yoshihiro Tsubouchi, "Islam and divorce among Malay peasants" in Shinichi Ichimura, ed., Southeast Asia: Nature, Society and Development (Honolulu, 1976);

Judith Djamour, Malay Kinship and Marriage in Singapore;

Almanak Indonesia, 1968, Djilid 1;

Statistik Indonesia, Central Bureau of Statistics, Jakarta, various years;

Census data for Malaysia and Indonesia; registration data on Moslem marriages in Singapore; and unpublished Moslem marriage data for Malaysia.

a

1974 b

1961 с

1973

ď Australia, Austria, Belgium, Canada, Czechoslovakia, Denmark, France, Federal Republic of Germany, German Democratic Republic, Hungary, Netherlands, Poland, Portugal, Sweden, Switzerland, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland (England and Wales), United States of America.

e 1949

f 1957

g 1966

h Excluding the states of Kedah and Perak.

i 1953

j The figures for Indonesia and its component regions are based on data in Almanak Indonesia, 1968, Djilid 1, p. 366. Data for the same years in Statistik Indonesia, 1968-1969, p. 42, do not agree with these figures, but the figures from Almanak Indonesia appear more likely to be the correct ones.

a Malay rather than an Islamic pattern of divorce is found, i.e. one which is culturally rather than religiously determined. This is not to say that this pattern characterizes all Malay-Indonesian populations, because there are sharp differences between sub-groups of this general ethnic category. Yet these differences are not explicable in terms of adherence or non-adherence to Islam or of degree of religiosity, however measured. The highest divorce rates in Peninsular Malaysia are found in those states which are most backward economically and educationally, and where the influence of Islam is generally held to be strongest. This correlation however, between the influence of Islam and the level of divorce rates does not hold more generally throughout the Malay world. Brunei Darussalam, strongly Islamic and ruled by a Sultan in the tradition of the Malay states, has very low divorce rates. In Indonesia, Central and East Java, two of the states with the highest divorce rates, are states where the hold of Islam on much of the population is very weak indeed.

Divorce rates are obviously far higher in Kelantan, Trengganu and Java than they are in Arab countries of the Middle East such as Iraq, Libyan Arab Jamahiriya and Syria, where the hold of Islamic orthodoxy can hardly be doubted, and Egypt, with its cosmopolitan and modernist image in the Arab world.²³ In other Middle Eastern countries such as Saudi Arabia and the Gulf States, data are unavailable.

If the statistical evidence indicates clearly that it must be something other than religion which accounts for the sharp differences in divorce rates between different Moslem populations, so too does an examination of the competing theological positions regarding divorce within Islam. On the one hand, under the Hanafi law, which obtains in the greater part of the Moslem world, "a husband may divorce his wife for any reason or for no reason at all",²⁴ merely by stating that he divorces her three times.²⁵ On the other hand, those Moslems wishing to condemn the custom of easy divorce can quote the Hadith (tradition of what the Prophet said or did) which states that "of the things which are lawful the most hateful to God is divorce". Thus there is a theological basis for reformed marriage laws in many Moslem countries which impose certain restrictions on the free exercise of the husband's right to divorce, but such restrictions have not been imposed in Malaysia. Administrative provisions in the states of Malaysia do require that every effort at reconciliation should be made before a *talak* (divorce) is registered,²⁶ but in at least two states for which studies are available, these provisions are not followed in practice.²⁷

Among Malays, the tradition of high divorce rates may pre-date the coming of Islam. Tsubouchi notes that the kinship structure of Malay society readily allows for divorce. In support, he cites the Jakun proto-Malays, "whose kinship structure is almost identical to that of the Malays but who have not been influenced by Islam, (and among whom) divorce is quite common, though not as common as in Malay society".²⁸ Social structure also plays a role. In the states of Kelantan and Trengganu in the 1940s and 1950s, before the wide spread of education, the immensely influential *ulama* (religious teachers) and *kathi* (religious officials) were apparently especially prone to frequent divorce and polygynous marriages. Many

²⁸ Tsoubouchi, op.cit., p. 28.

²³ Divorce rates in the Arab Middle East appear to be higher in cities than in rural areas, which is the opposite of the situation among Malays. In most of these countries, they appear to have declined since the Second World War [Edwin Prothro and Lutfy Diab, *Changing Family Patterns in the Arab East*, (American University of Beirut, 1974), chapter 7].

²⁴ Alfred Guillaume, *Islam* (Harmendsworth, Penguin Books, 1956), p. 174.

²⁵ The wife is accorded no such privilege; she cannot divorce her husband on any ground whatever, except through the religious courts. In Malaysia, the Moslem wife can apply to the *kathi* for a divorce under the procedures known as *cerai taalik* (where the husband has broken the conditions to which he has agreed on the marriage certificate, *kholo'* (which enables the wife to pay the husband for his consent to divorce her) or *fasah*. "This in essence gives the wife the right to ask for divorce on medical or moral grounds or on grounds of failure to maintain, desertion or imprisonment" [Ahmad Ibrahim, *Law and Population in Malaysia*, Law and Population Monograph Series, No. 45 (Medford, Massachusetts, Fletcher School of Law and Diplomacy, Tufts University, 1977), p. 37].

²⁶ Ibid.

 $^{^{27}}$ viz. Kelantan and the Federal Territory of Kuala Lumpur. See Nik Ramlah Nik Mahmood, "Muslim divorces in Kelantan – a socio legal study", Maznah bte. Hj. Haron, "Muslim divorces in Kelantan – a socio legal study" and Maznah bte. Hj. Haron, "Muslim marriage and divorce in the Federal Territory", project papers submitted in partial fulfilment of the requirements for the Degree of Bachelor of Laws (Honours) in the University of Malaya, Kuala Lumpur, 1978/79 and 1975.

village parents considered it an honour to marry a daughter to a respected religious teacher, and a number of Malay novels written in the 1950s were critical of resultant abuses.²⁹

What is striking in table 106 is the universality of the decline in divorce rates throughout the Malay world, in contrast to the recent sharp rise in divorce rates in the West. By 1975, the trend lines were on the point of crossing: divorce rates amongst European and European-derived populations had doubled since 1960, whereas divorce rates among Moslems in Indonesia and Malaysia had dropped to one third or less of their 1960 figure over the same period. Divorce rates among Peninsular Malaysian Malays and Indonesian Moslems were already lower than those in the United States, the Union of Soviet Socialist Republics, or England and Wales. Admittedly, crude divorce rates overstate the rate of divorce among the eligible (currently married) population in Western countries as compared with Malay populations, because the denominator in Malay populations includes a much higher proportion of children;³⁰ even so, the trends are clear and reflect the rather curious fact that whereas Westernization and modernization are widely held to be influences lowering the divorce rates amongst Malays, the divorce rates among the "model" Western populations (especially those of the United States and England and Wales) are moving rapidly toward the levels from which Malay populations have just descended.

Figure 11 shows trends in general divorce rates (i.e. divorces per 1,000 adult population) among Moslems in a number of Peninsular Malaysian states for which data are available.³¹ Divorces are net of *rujuk* (i.e. reconciliations between husband and wife after the divorce has been officially registered),³² so the figure reflects only those divorces which effectively and permanently terminate the marriage.³³ To smooth annual fluctuations and highlight the trend the data are presented in the form of a three-year moving average.

It would appear that the sharpest decline in divorce rates in Kelantan occurred in the period from the end of the Second World War to the mid-1950s, but there was another period of sharp decline in the early 1960s. In Trengganu, by contrast, the decline did not begin until the late 1950s. In Malacca and Johore the decline (starting from much lower initial divorce levels) was a steady one, with an acceleration in Malacca in the early 1960s. In Singapore, a sharp decline, as a result of new legislation, occurred over the period 1959-1961.³⁴

Data on the downward trend in divorce and on the wide differentials among states in Malay rates of divorce and polygyny are supported by census figures. In 1970, only 2.1 per cent of Malay females aged over 15 were currently divorced, compared with 6.2 per cent in 1957. Although these

²⁹ For example, the well-known novel *Tok Guru* deals with a situation in which a village father forces his daughter to marry an elderly religious teacher and only after the marriage takes place discovers that the teacher was already married.

³⁰ Data are not available in sufficient detail to calculate the more refined, general divorce rates (i.e. divorces per thousand persons aged 15+) for all countries and populations included in table 106. However, standardizations of crude divorce rates for age structure (of which the general divorce rate is one example) tend to raise the rate for Malay populations by about 25 per cent, holding the rates for ethnic-European populations constant. A further refinement of the rates to allow for the variable percentage of the population aged 15+ who are currently married would lead to more variable adjustment factors, owing to wide differences in these proportions within the groups of Malay and ethnic-European populations.

³¹ The adult Malay population (aged 15+) has been used as the denominator for these rates. All Malays are Moslems, but there are also a small number of non-Malay (mainly Indian) Moslems who are not included in the denominator for the estimates. They would number less than 2 per cent of the Malay Moslems in all the states included in figure 11. Estimates of adult Malay population for most of the years are interpolations between the available census or projection data and are therefore subject to a degree of error, but not large enough to invalidate the general trends shown.

 $^{^{32}}$ A Moslem husband is allowed to change his mind and be reconciled with his wife after officially registering his divorce, provided that the reconciliation takes place within the 100-day period of *eddah* following the divorce. The frequency of such *rujuk* cases in West Malaysia (commonly 10 and sometimes even 20 per cent of all registered divorces) attests to the frequency of hasty divorces which are later reconsidered.

 $^{^{33}}$ If the divorce (*talak*) is twice followed by *rujuk*, the third *talak* is irreversible; the couple cannot then be reunited as husband and wife according to Islamic law unless the wife first marries (and consummates the marriage with) someone else and is subsequently divorced. Some husbands however, after rashly invoking the three *talaks* simultaneously, arrange for the ex-wife to marry another man on the understanding that he will not consummate the marriage but will quickly divorce her so that she may remarry her first husband. Such a situation, the source of much ribald humour, is not rare.

³⁴ A matrimonial court was established as part of the law reform of 1957, effective from December 1958 [see Judith Djamour, *The Muslim Matrimonial Court in Singapore* (London, The Athlone Press, 1966)].

Figure 11. General divorce rates^a among Moslems, various states of Peninsular Malaysia and Singapore, three-year moving average, 1948-1975



Sources: Population census and unpublished Moslem marriage data.
 Notes: Divorces (talak) are net of rujuk (reconciliations after the divorce has been officially registered). See also foot-note ³¹.

^a Number of divorces per 1,000 population aged 15 and above.

figures could have been influenced by changes in the average time taken for women to remarry after their divorce, the change is so abrupt that it can surely be interpreted as reflecting a sharp decline in the incidence of divorce. The percentages currently divorced in 1970 were much higher in Kelantan and Trengganu (4.5 and 3.9 per cent, respectively) than in the other states, but they were nevertheless still well below those for Malays in Peninsular Malaysia as a whole in 1957.^{3 5} Census data do not show very marked urban-rural differences, but on the whole they suggest that the incidence of divorce is greater in rural than in urban areas.

D. CAUSES OF TRENDS AND DIFFERENTIALS IN DIVORCE RATES

In attempting to understand why divorce rates should be generally so much higher among Malay people than elsewhere in the Islamic world, an understanding of the reasons for the observed trends and differentials in Malay divorce rates is perhaps the first requirement. This includes examining why divorce rates among Malays have declined so sharply, why there were wide interstate differences in the first place and why these have persisted over time.

First, the regional differentials can tentatively be attributed to a number of interrelated circumstances. Divorce rates in the 1940s and 1950s appear to have been highest in states the populations of which were poorest, most rural, and least educated, where age at marriage was lowest and marriages most strictly parent-arranged, where the rate of polygyny was highest, where the laws on registration of *talak* left the most loopholes and where the administration of these laws was least stringent.³⁶

There may, however have been more complex cultural reasons as well. For example, the four states neighbouring Thailand (Kelantan, Trengganu, Perlis and Kedah) have had the highest divorce rates. These are states where the role of Islam is generally considered to be strong but also, paradoxically, where the earlier Hindu-Buddhist heritage is more pervasive.³⁷ The isolation of Kelantan and Trengganu³⁸ and the almost complete absence of in-migration from other regions has led to the preservation of a distinctive culture in these states.³⁹ One observer, for example, has recently attributed the high divorce rate in Kelantan partly to "the marked sensitivity of the Kelantanese to social affronts",⁴⁰ which makes reconciliation between a husband and wife difficult once either has humiliated the other publicly.

The general decline in divorce rates among Malays can perhaps be attributed to changes in the complex web of factors discussed above. Improved standards of living have removed many of the poverty-related reasons for divorce.^{4 1} Sharply rising age at marriage and rapid strides in the education of Malay women (see table 107) have been accompanied by increasing freedom for them to choose their own husbands, though no definitive documentation of this trend is yet available. Polygyny, a frequent cause of divorce, is becoming less common. Malays during the past two decades

³⁹ See, for example, William R. Roff, ed., *Kelantan: Religion*, *Society and Politics in a Malay States* (Kuala Lumpur, Oxford University Press, 1974).

⁴⁰ *Ibid.*, p. 228.

³⁵ They were, however, well above those for Chinese and Indians in Peninsular Malaysia in both 1957 and 1970. The proportion of Chinese women who were currently divorced was 0.4 per cent in 1957 and 0.5 per cent in 1970; for Indians, the figures were 1.0 and 0.9 per cent, respectively. For further evaluation of the marital status data, see Gavin W. Jones and Manjit Singh Sidhu, "Ethnic and regional differences in marital status in Peninsular Malaysia", *Population Geography* (forthcoming).

 $^{^{36}}$ At the other end of the scale, however, it is not clear why divorce rates were so much lower in Johore than in Singapore.

 $^{^{37}}$ It is perhaps significant that divorce rates in Indonesia are also very high in the areas (Central Java, Yogyakarta and East Java) where the Hindu heritage has been far from completely removed by the later accretion of Islam. The even higher divorce rates in West Java (more orthodox Islam) and the low rates in Bali (still Hindu) however, highlight the complexity of the Indonesian divorce situation.

 $^{^{38}}$ As recently as two decades ago, the road trip to Kelantan from the west coast was a long and arduous one, with frequent ferry crossings of rivers. In the monsoon season, Kelantan was sometimes cut off for months. Nowadays, all ferries have been replaced by bridges and the road trip from Kuala Lumpur takes about 11 hours. There are also train and air services.

⁴¹ These are much more complex than the single povertyrelated reason (the wife's extravagance with her husband's limited income) mentioned by T.E. Smith, "Marriage, widowhood and divorce in the Federation of Malaya", IPU Conference, New York, 1961. For example, low standard of living fosters out-migration of males in search of work, and hence extended periods of separation of spouses; failure of the husband to provide adequately for his family's needs; and family quarrels. More generally, poverty is linked as well to low levels of female education, early marriage and other elements of the mutually-reinforcing group of causes of high divorce rates.

Community/state		Percer	ntage literate, ageo	Per cent completed LCE ^a aged 20-29		
		1947	1957	1970 ^b	1957	1970
Malay:	Johore	17.9	38.8	78.6	3.3	10.6
	Kedah	7.1	23.1	69.1	0.9	7.3
	Kelantan	3.6	18.6	54.6	0.9	6.2
	Malacca	17.2	39.9	75.8	2.0	9.5
	Negri Sembilan	31.6	53.0	84.0	3.6	13.5
	Pahang	18.3	40.1	72.2	1.8	8.4
	Penang	38.4	62.3	84.5	4.1	13.2
	Perak	38.0	55.0	79.4	2.4	9.5
	Perlis	15.3	38.3	76.1	2.6	9.9
	Selangor	31.9	47.4	83.4	4.3	20.2
	Trengganu	3.3	19.7	62.2	0.7	5.4
Malay:	All Peninsular Malaysia	18.4	37.3	73.6	2.2	10.4
Chinese:	All Peninsular Malaysia	33.6	47.8	67.6	8.7	17.6
Indian:	All Peninsular Malaysia	27.8	45.3	66.5	9.5	16.2

Table 107. Indices of educational status among Malay females aged 15-29by state, Peninsular Malaysia, 1947-1970

Sources: Census reports for 1947, 1957 and 1970.

^a Lower Certificate of Education and above; in 1957, including all those who had spent at least 7 years in school. This will include many who did not pass LCE.

^b Probably biased downwards compared with 1947 and 1957 figures, because the newly-introduced category "semi-literate" are not included as literate.

have been very sensitive to the need to change the negative image of their culture occasioned by what is seen as an irresponsibly high level of divorce.⁴² Reform of divorce laws and tightening of their administration appears to have played a role in lowering divorce rates in Singapore and Malacca and to a lesser extent in Perak and Selangor. Still, progress in this direction has been slow. Draft legislation on a uniform Moslem family law for all states of Malaysia has been waiting approval by the National Council of Islamic Affairs for the past four years; if passed it could have major effects on divorce rates in those states where they are still high.

E. SUMMARY AND CONCLUSIONS

The sharp changes in marriage patterns in Peninsular Malaysia during the past decades reflect, and in turn are partly responsible for far-reaching social and economic changes. They are probably irreversible; societies which have moved from parent-arranged marriages to a free choice of spouse by the individual are not prone to revert to the former system, nor is age at marriage likely to fall once the inclination towards later marriage develops. In Peninsular Malaysia, the rise in age at marriage, the trend away from parent-arranged marriages and the sharp decline in divorce rates in the Malay community are interrelated trends, tied to education, Westernization, and other aspects of economic and social change. Any attempt to isolate the independent effect of any one of these determinants is doomed to failure, not least because the statistical identification of a relationship

⁴² See, for example, the resolutions passed by the Conference of Islamic Women's Organizations in 1975. (*Lapuran Muktamar Pertubuhan-pertubuhan Perempuan Islam Malaysia*, Dewan Bahasa dan Pustaka, Kuala Lumpur, March 1975).

between any one variable and change in marriage patterns begs two questions: the real meaning of the independent variable (e.g. "years of education") and its mode of effect on marriage patterns; and the extent to which the relationship with the variable in question would have been different if set in a different matrix of social and economic change. However, there seems no reason to dispute the relevance to Malaysia of findings from recent cross-national studies that education, urbanization, and non-agricultural employment (especially for women) have played a major role in raising age at marriage and will continue to do so in future.^{4 3}

Although the changes which have occurred so far in age at marriage, arrangement of marriage and frequency of divorce are all likely to be irreversible, they may be now reaching a stage at which the recent unidirectional trends will cease and fluctuations will occur depending, perhaps, on a rather different set of causal factors. The revolution in marriage patterns, in other words, has largely run its course and a new phase is beginning.

The revolution in marriage patterns has now produced a drastically different social order than that existing two or three decades ago. Most Malay and Indian women in West Malaysia at that time were married, at the behest of their parents, before age 18, to a man they had never met who was five or more years their senior. Few of them had any high school education at the time they married, and although their husbands were not very well educated either, they tended to have had some years' more education than their wives. This situation made for a subservient role for women, in keeping with the traditional social order. Few would have predicted that by the mid-1970s, most Malay and Indian women would still be single in their twenty-first year, would enjoy considerable independence in their choice of spouse, would marry young men less than four years their senior and (in the case of Malays) continue to live with this first spouse in a much higher proportion of cases than three decades earlier.

These changes must have had profound effects on inter-spouse and inter-generational relationships, which have as yet been little studied. Place of residence after marriage is changing in the direction of immediate establishment of a nuclear household. Young couples have much more independence from their parents than was formerly the case, and the effect of this on "filial piety" in the case of the Chinese and the extent to which parents are cared for in old age by all ethnic groups needs to be studied. For Malays in particular. marital disruption due to divorce or widowhood at ages below 60 has become much less frequent, and children therefore have a much better chance than formerly of living with both their natural parents throughout their adolescence. With the exception of Kelantan, Trengganu and Perlis (where the decline in divorce rates has lost momentum since the late 1960s and has left these states with high divorce rates which maintain longstanding interstate differentials), crude divorce rates among Malays in Peninsular Malaysia are now lower than those of populations in most Western countries.

There are likely to be some important demographic consequences of the changing marriage and divorce patterns. As already noted, the rising age at marriage is lowering fertility and extending the mean length of generation. At the same time, among Malays, the falling divorce rate may well be working in the opposite direction. Saw Swee Hock has noted that the birth rate was low among Malays in the high-divorce states in the 1940s and 1950s, and he attributed this partly to the influence of marital disruption and instability.⁴⁴ Lowered divorce rates should now be making for higher fertility.45 Certainly in Kelantan and Trengganu, crude birth rates among Malays are high (36.4 and 37.7 per 1,000, respectively, in 1976 compared with 31.4 among Malays in the west coast states) and rates of population growth are very fast, reflecting the additional effect of the lowering of mortality rates during the past two decades.

⁴³ Peter C. Smith and Mehtab Karim, "Urbanization, education and nuptiality transition in four Asian societies", paper prepared for Tokyo Conference on Comparative Fertility Transition, 1978;

Chitra Sundaram, The Literacy Transition and Female Nuptiality: Implications for the Status of Asian Women (Honolulu, East-West Population Institute, 1977).

⁴⁴ Saw Swee Hock, "Fertility differentials in early postwar Malaya", *Demography*, vol. 4 (1967), p. 649.

⁴⁵ Theoretically, the effect of increased marital stability in raising fertility could be offset by the role of divorce in terminating sterile or subfecund marriages and giving the spouses the chance to find a more reproductively-compatible partner. This is particularly so where divorce is followed by early remarriage, as it normally is among Malays. Nevertheless, although sterility and subfecundity are undoubtedly important reasons for divorce among Malays, it is most unlikely that the net effect of more divorce would be to raise fertility.
IX. STATUS OF WOMEN*

INTRODUCTION

Studies on the status of women in Malaysia have been few. This may be because Malaysia, as a developing country, has a high female participation in economic decision making at the household level. Furthermore, until recently the status of women had not been perceived to be a great social With the advent of rapid, organized problem. socio-economic development since the 1970s however, the position of women relative to that of men with respect to education, access to highlevel job opportunities etc. has become a more urgent issue. This chapter shall examine the status of Malaysian women with regard to literacy, educational attainment, employment, marital status and legal protection.

A. LITERACY RATES

For Peninsular Malaysia on the whole, literacy rates improved by about 15 per cent during the period 1970-1980, from 60.8 to 75.3 per cent (table 108). The table also shows in 1980 literacy rates for females (67.3 per cent) were considerably lower than those for males (83.5 per cent). However, the progress made by females over

Contributed by Fong Chan Onn, University of Malaya.

1983).

the decade has been impressive. The female literacy rate improved from 49.6 per cent in 1970 to 67.3 per cent in 1980. This amounts to an increase of 17.7 per cent, compared to the increase of 11.4 per cent among males. The improvement in female literacy rates suggests that the traditional barriers to education for women have been gradually removed, and that women are increasingly taking advantage of educational facilities in the country.

There are also differences in literacy rates between the rural and urban female populations. Among urban females in 1970 levels of literacy were higher, at 58 per cent, compared with only 46 per cent for their rural counterparts. However by 1980, urban female literacy had increased to 75 per cent, while the rural rate was 63 per cent (table 109). Male-female differences had slightly lessened by 1980, with urban male literacy of 88.5 per cent and about 75 per cent for urban females. For the rural population, the male literacy rate in 1980 stood at 80 per cent, and the female rate was 63 per cent.

B. EDUCATIONAL ENROLMENT AND ATTAINMENT

Although national education policy does not discriminate between the sexes in extending educa-

Literacy in any language		1970			1980			
	Male	Female	Total	Male	Female	Total		
Literate	72.1	49.6	60.8	83.5	67.3	75.3		
Semi-literate	5.0	4.5	4.8	3.3	3.5	3.4		
Illiterate	22.9	45.9	34.4	13.2	27.2	21.3		
Total								
Per cent	100.0	100.0	100.0	100.0	100.0	100.0		
Number	3 022 659	3 031 100	6 053 759	3 935 552	4 041 536	7 977 088		

Table 108. Percentage distribution of population aged 10 years and over by literacyin any language and by sex, Peninsular Malaysia, 1970 and 1980

Sources: R. Chander, General Report - 1970 Population and Housing Census of Malaysia, (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, (Kuala Lumpur, Department of Statistics,

Literacy in			Urban			Rural		
any language		Male	Female	Total	Male	Female	Total	
Literate	1970	78.4	57.9	68.2	69.3	46.0	57.6	
	1980	88.5	74.9	81.6	80.3	62.6	71.3	
Semi-literate	1970	6.6	6.2	6.4	4.3	3.7	4.0	
	1980	3.0	3.5	3.3	3.5	3.5	3.5	
Illiterate	1970	15.0	35.9	25.4	26.4	50.3	38.4	
	1980	8.5	21.6	15.1	16.2	13.9	25.2	
Total								
Per cent		100.0	100.0	100.0	100.0	100.0	100.0	
Number	1970	920 580	919 963	1 840 543	2 102 079	2 111 137	4 213 216	
	1980	1 519 900	1 548 000	3 068 000	2 415 600	2 493 500	4 909 200	

Table 109. Percentage distribution of population aged 10 years and over by literacy in any
language, sex and residence, Peninsular Malaysia, 1970 and 1980

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977). Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

tional opportunities, social norms and traditional values hinder the maximum use of these educational opportunities by women, especially by those in rural areas. According to the Labour Force Survey of 1979, 33.2 per cent of the female labour force in rural areas in Peninsular Malaysia at that time had no formal education, while only 10.6 per cent of the rural male labour force had no formal education. Also, only 22 per cent of rural women had attained secondary or tertiary levels of education, compared to 36.1 per cent among rural men.¹ Table 110 shows that among persons aged 15-19 who had passed through the secondary educational system, larger percentages of males than females completed the upper-secondary level of education. However, the sex differential in educational attainment was narrower among younger generations. Thus, although level of educational attainment by sex does not exhibit any large differences among younger generations, the total male population is still generally better educated than the female.

Education has different effects on males and females. For males, education represents more of

a "pure income" effect, which tends to affect fertility positively. When income increases for males, children become less costly and this tends to raise fertility. For females however, education has the opposite effect. Education represents a "price" effect which encourages women to enter the labour market instead of having more children. As Williams puts it, "Education appears to be one of the most powerful and persuasive factors of development affecting fertility". The impact is largest and best documented in the case of women, who find that higher education opens opportunities to them. They thus can participate in activities not centred on the home or on child-rearing and can undertake new economic and social responsibilities.²

Women with higher educational attainments tend to marry later and have smaller families. They also play a greater part in decision making in the family. They are more efficient in their methods of child-rearing and more successful in

¹ Malaysia, Fourth Malaysia Plan, 19,81-1985 (Kuala Lumpur, Government Printer, 1981).

² A.D. Williams, "Determinants of fertility in developing countries, review and evaluation of the literature" in Michael C. Keelay, ed., *Population, Public Policy and Economic Development* (New York, Praeger Publishers, 1976).

A	N 1	Educational attainment (per cent)					
Age group and sex	Number (thousands)	No schooling	Primary	Lower secondary	Upper secondary and above		
Male							
5 - 9	910.4	38	62				
10 - 14	829,9	4	57	39			
15 - 19	731.0	5	19	40	36		
20 - 29	1 106.2	8	35	26	31		
30 - 39	774.2	13	52	16	19		
40 - 49	546.2	25	57	8	10		
50 - 59	362.2	37	54	4	5		
60 +	365.7	56	38	3	3		
5 +	5 625.9	19	46	20	15		
Female			• •				
5 - 9	870.8	39	61				
10 - 14	800.6	5	58	37			
15 - 19	753.6	8	24	36	32		
20 - 29	1 192.0	15	42	19	24		
30 - 39	760.7	32	49	9	10		
40 - 49	544.3	58	35	4	3		
<u>50 - 59</u>	368.8	75	21	2	- 1		
60 +	376.1	90	9	1	1		
5 +	5 666.9	32	42	16	11		
Total							
5 - 9	1 781.1	38	62				
10 - 14	1 630.5	4	58	38			
15 - 19	1 484.6	7	21	38	34		
20 - 29	2 298.2	11	39	23	27		
30 - 39	1 534.9	22	51	12	15		
40 - 49	1 090.6	42	46	6	7		
50 - 59	731.0	56	37	3	3		
60 +	741.9	73	23	2	2		
5 +	11 292.8	25	44	18	13		

Table 110. Percentage distribution of the population by educational attainment,age group and sex, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

investing in the future of their children. The increasing literacy rates for women in Peninsular Malaysia, and the family planning programme initiated since 1966, have contributed to the decline in population growth in the country. Many studies on the relationship between education and fertility have shown a negative correlation. A study by Bogue showed that educational level accounted for over half the variance in fertility among a large number of countries at various stages of demographic transition, and four times the variance of all other variables in the study taken together.³

C. EMPLOYMENT OF WOMEN

1. Growth of manufacturing sector and female participation rate

The rate of socio-economic progress of Malaysia in the post-war era, especially since

³ D.J. Bogue, *Principles of Demography* (New York, John Wiley and Sons, 1968).

independence in 1957, has been significant and rapid. Over the period 1960-1970, the economy recorded an annual growth rate of over 5 per cent.⁴ This favourable economic situation has been due to the reliable performance of the traditional commodity sector of the Malaysian economy (specifically the natural rubber and tin industries), as well as the growing importance of the modern manufacturing sector in the free trade zones (FTZ). The manufacturing sector has received the greatest emphasis in the strategy of economic diversification. It is one of the fastest growing sectors and has had the greatest impact on the domestic labour situation. The establishment of FTZs in various parts of the country has brought about the entrance of an unprecedented number of young women into the industrial labour force.

Prior to 1970, most manufacturing industries were capital-intensive import-substitution industries, and the majority of the workers were After 1970, with the change in national men. development policies especially as regards industrial development, most manufacturing industries became labour-intensive and export-oriented A notable feature of these exportenterprises. oriented industries, particularly the electronics, textiles and food-processing industries, was that the majority of their workers were women. Table 111 shows the proportion of female to male workers in the manufacturing sector over the years

1957-1976. The figures are indicative of the rapid increase of female labour-force participation and the formation of a significant category of women workers. This is also when compared with the relative decline in number of male factory workers.

2. Demand for female labour

In terms of numbers, the majority of women workers in the manufacturing sector work as assembly operators in the electronics factories which are owned by foreign multinational corporations.⁵ For example, in 1976 out of 47,000 workers employed in the 138 multinational factories in Malaysia, 99 per cent were females.⁶ In the following discussion of the situation of female workers, the focus will be on these multinational employers, particularly those owned by American and Japanese industrial concerns.

One reason why these multinational corporations set up their subsidiary companies in relatively less-developed countries and areas such as Singapore, Malaysia, Hong Kong, Republic of Korea and Thailand, is the availability of cheap and docile female labour.⁷ Relative to employees in the west, female workers here are cheaper to employ and easier to control. In the United States in the 1960s, for example, the electronics

⁷ Jamilah Ariffin, *loc. cit.*

Year	To	Total		ale	Female	
	Number	Per cent	Number	Per cent	Number	Per cent
1957	135 382	100	112 837	83,30	22 545	16.70
1970	251-939	100	178 881	71.02	73 058	28.98
1974	498 113	100	313 385	62.90	184 728	37.10
1975	533 496	100	324 070	60.75	209 426	39.26
1976	584 341	100	342 828	58.67	241 513	41.33

Table 111. Males and females employed in the manufacturing sector, Peninsular Malaysia, 1957-1976

Sources: Jamilah Ariffin, "Women workers in the manufacturing industries" in Evelyn Hong, ed., Malaysian Women: Problems and Issues (Penang, Consumer Association of Penang, 1983), except for: 1976 data preliminary, from Labour Force Survey 1976.

⁴ In 1973, with the exception of Japan and Singapore, Malaysia was the most affluent nation in Asia, with a per capita GDP of \$US 570 [World Bank, *World Tables 1976* (Baltimore, Johns Hopkins, 1976)].

⁵ For details see Jamilah Ariffin, "Industrial development in Peninsular Malaysia and rural-urban migration of women workers", paper presented at the Tenth International Congress of Anthropological and Ethnological Sciences in the series on Development and Women, New Delhi, December 1978.

⁶ Malaysian Business Journal, January 1978.

industry was troubled by frequent industrial strife, which could not be resolved even when employers agreed to improve payments and working conditions. In their efforts to secure cheap and compliant workers, these electronic companies transferred their operations to the southern parts of the United States and south-east Asia.⁸

The multinational electronics companies seemed to prefer to employ women more than men workers. This deliberate policy of recruiting women is closely related to the nature of the electronics industry, which requires workers who can perform intricate work with diligence, patience and speed. In this sphere, female workers almost always prove to be better than male.

3. Effect of female rural-urban migration to modern industrial factories

Prior to 1970, two distinct features could be observed in the structure of labour force participants in the manufacturing sector. First, in terms of male-female composition, there were more men than women workers (see table 111). Secondly, in terms of racial composition, workers from the Chinese community formed the majority, Malays formed the second largest group and Indians the third largest (see table 112).

Since 1970, the Malaysian Government has embarked on a New Economic Policy (NEP). Among other things, NEP required that employment in industries should reflect the racial composition of the society, or that at least 30 per cent of any industrial firm's work-force should comprise Malays. Since the implementation of this policy, it has been reported that more than 50 per cent of the unskilled labour force in manufacturing industries are Malays, and in the case of firms employing a majority of female workers, that most of them are young Malay women from rural areas.⁹

Recent increases in labour force participation rates of Malay female rural-urban migrants at work in factories have been astounding. In 1970, it can be estimated that there were no more than 1,000 Malay female rural-urban migrants working in the manufacturing sector. By 1976, this number has increased to over 63,000.¹⁰

Malay women workers now form a significant proportion of the work-force in the manufacturing sector, and their annual rate of increase greatly exceeds that of Chinese women workers (who formed the majority of female workers). Table 113 shows that over the period 1957-1970, the rate of annual increase of Malay females in the manufacturing sector was 16 per cent, compared with 17.3 per cent for Chinese female workers. By 1976, the rate of increase for Malay females had grown to 19.4 per cent; exceeding by about 8 per cent that for Chinese females.

⁹ Malaysia, Mid-Term Review of the Second Malaysia Plan, 1971-1975, (Kuala Lumpur, Government Printer, 1973).

¹⁰ Jamilah Ariffin, *loc. cit.*

Year	Total	Malay	Chinese	Indian	Other
 1957	100	39.4	59.6	0.7	0.3
1970	100	38.3	59.9	1.6	0.2
1974	100	43.1	52.2	4.4	0.2
1975	100	43.9	50.7	5.2	0.2
1976 ^a	100	45.5	49.4	4.8	0.3

 Table 112. Females employed in the manufacturing sector by race, Peninsular Malaysia, 1957-1976

 (Per cent)

Source: Calculated from data obtained from the Statistics Department of Malaysia in October, 1979.

^a Based on preliminary data.

⁸ For details, see "The global assembly line and the social manipulation of women on the job", *South-East Asia Chronicle*, Pacific Research Issue, vol. 9, No. 56 (1979).

Year	Total	Malay	Chinese	Indian	Others
1957	22 545	8 889	13 448	149	59
1970	73 058	27 949	43 739	1 193	177
Yearly rate of increase 1957 - 1970 (per cent)		16.00	17 30		
1074	194 709	70.00	17.30	0.174	0.57
Yearly rate of increase 1970 - 1974 (per cent)		46.28	30.15		
1975	209 426	91 929	106 249	10 915	334
Yearly rate of increase 1974 - 1975 (per cent)		15.30	10.10		
1976	241 513	109 771	119 532	11 590	621
Yearly rate of increase 1975 - 1976					
(per cent)		19.40	12.50		

Table 113. Females employed in the manufacturing sector by race, Peninsular Malaysia, 1957-1976 and yearly rate of increase of Malay and Chinese female workers

Source: Statistics Department.

4. Employment conditions for female workers

(a) Work and payment systems

In the manufacturing industries, men workers usually receive better pay than women workers for performing identical task. Table 114 shows the unequal wage rates for male and female production workers.

Ariffin,¹¹ based on a 1977 survey, estimated that the monthly income of female electronics workers was within the range \$M200-\$M250. This rate was much higher than that of non-electronics factory workers who earned about \$M100-\$M150 per month. However, the higher wage rate was due to the different work requirements, such as night-shift, overtime and piece rates. Wide dissatisfaction and insecurity about their jobs have been expressed by many female factory workers. According to the Ariffin survey, of 1,278 factory workers in Peninsular Malaysia, 62.9 per cent indicated dissatisfaction with and worries about their job. These feelings are probably a result of the nature of employment conditions for women workers. In 1975, for instance, many electronics workers were turned out of their jobs, and a majority of them were women assembly operators.

In a context where new workers are easily trained and the supply of labour is plentiful, the bargaining power of experienced workers is low. When these female workers are dismissed, they have difficulty obtaining new posts with pay rates commensurate with their experience. This is largely because it is not difficult for the electronic

⁽b) Job security and occupational mobility

¹¹ Ibid.

Table 114. Male-female wage differentials,
Peninsular Malaysia, 1968/69
and 1974

Industry and occupation	Women's wages as a percentage of men's		
	1968/69	1974	
Rubber milling:	· · · · · · · · · · · · · · · · · · ·		
Sheet rubber maker	73	81	
Heveacrumb process worker	70	82	
Biscuit manufacturing:			
Baker, general	79	62	
Textiles:			
Spinner	67	91	
Electronics:			
Quality control supervisor ^a		99	

Source: Statistics Section, Department of Labour, Ministry of Labour and Manpower, Malaysia, Occupational Wage Surveys, Peninsular Malaysia, 1968/69 and 1974.

^a In 1968/69, the electronics industry had not yet been established in Malaysia.

companies to train new workers. By virtue of these firms' highly specialized production systems, the time required for new workers to learn the required skills and achieve high marginal productivity is very short.

Nor from the point of view of occupational mobility do female factory workers, in general, have a bright future. Most production supervisors in manufacturing industries are men. Therefore job mobility among women is restricted, and their chances for promotions are hindered. Owing to their lack of familiarity with industrial management strategies and the absence of a concerted group consciousness, they become the passive recipients of the manoeuvres management.

5. Employment of women and the law

There is no legal restriction on the employment of women under the Employment Act 1955,¹² which regulates the working conditions, payment of wages and the dismissal of employees who are under a contract of service with an employer and are engaged to do manual labour. Appointments to the civil service and other professional and executive services are open to both men and women. To prevent the exploitation of female labourers, the Act prohibits women (with certain exceptions, such as those with working-shift duties) from working in any industrial or agricultural undertaking between 10:00 pm and 5:00 a.m. (although this was amended in 1970), or to commence work without having had a period of at least 11 consecutive hours of rest.

The main provisions of the Employment Act 1955 (Revised 1981) that relate to demographic change are those concerning maternity leave and benefits. Under the Act, a female employee who expects a child is entitled to absent herself from work for a period of 60 days prior to and immediately after her confinement. During this period, she will be entitled to a maternity allowance, although under a recent amendment to the Act, no maternity allowance is payable if the women has three or more children.

Women serving in the civil service are under the General Orders, which regulate the terms, conditions, conduct and discipline of public officers. The orders provide for maternity leave with full pay for a period of up to 42 days in addition to the normal sick leave permitted to all Maternity leave is, however, available officers. for only three occasions during a woman officer's Should she have more child after the career. third, she would have to resort to her normal leave concession. The aim of the employment law in providing maternity benefits is to assist female workers from lower income groups.

D. MARITAL STATUS

A classification of the population aged 10 years and over by marital status for 1980 is given in table 115. It will be observed that 50.3 per cent of males and 42.0 per cent of females aged 10 years and above were unmarried in 1980. Nearly half of females aged 10 years and over, or 48.5 per cent, were reported as married; for males, the proportion was 47.4 per cent. It will also be noticed from the table that the incidence of widowhood was higher among females than among males. While 1.7 per cent of all males aged 10 years and

¹² The Employment Act 1955 (Revised 1981) amended the Employment Ordinance 1955.

Man 14 - F 14 - 4	Ma	hle	Fen	nale
Marital status	Number	Per cent	Number	Per cent
Never married	2 370 456	50.3	2 016 326	42.0
Married	2 236 456	47.4	2 828 107	48.5
Widowed	81 913	1.7	367 717	7.7
Divorced/permanently separated	26 689	0.6	84 008	1.8
Total ^a	4 715 514	100.0	4 796 158	100.0

Table 115. Marital status of the population aged 10 years and over by sex, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

^a Not including a total of 120,111 persons counted on self-enumeration forms.

above were widowed, the corresponding rate for females was 7.7 per cent. Table 116 gives the proportion of the population widowed, divorced or permanently separated by age group in 1980. It will be noted that a larger proportion of women than men were widowed and divorced at almost all ages.

The percentage distribution of the population aged 10 years and over by marital status and sex for Peninsular Malaysia, Sabah and Sarawak is given in table 117. It will be observed that there were differences in the various proportions for Peninsular Malaysia, Sabah and Sarawak. In 1980, Sabah had the highest proportion of unmarried male population and Sarawak had the highest proportion of never-married female population. The lowest proportion of never-married males and females were to be found in Peninsular Malaysia and Sabah, respectively. The highest proportion of married women were to be found in Sabah. Incidence of widowhood among females was highest in Peninsular Malaysia, and for males it was highest in Peninsular Malaysia and Sarawak.

E. LAWS AFFECTING FERTILITY

1. Child allowances

Under the Income Tax (Amendment) Act 1980,¹³ certain relief is given to taxpayers with

For any basis year, the following children. children of an individual resident who maintains or partly maintains them at any time in that year are eligible for this relief: (a) unmarried and under sixteen in the year preceding the year of assessment; (b) unmarried of any age receiving at any time in the preceding year full-time instruction at any university, college, school etc.; (c) unmarried of any age serving under articles etc., to qualify in a trade or profession, or studying part-time for a trade or profession; (d) unmarried child who is a physical resident of Peninsular Malaysia, over sixteen in preceding year, proved to the satisfaction of the Director-General of Inland Revenue as not receiving full-time instruction at any university, college, school or similar educational establishment because the child is receiving full-time education at a college, university or other similar institution of higher education (this would exclude a school) or serving articles outside Singapore and Malavsia. Relief may be obtained for actual amounts spent directly on the maintenance and education of such children. Deductions are made when any child is receiving income, no matter where derived, which exceeds the deduction allowed, or when a child is working at any job.

2. Alimony

The Married Woman and Children (Maintenance) Act of 1950 provides for the maintenance of women and children by the husband or parents, where the parties are separated, until the wife remarries and the children reach the age of 18. If

¹³ The Income Tax (Amendment) Act 1980 amended the Income Tax Act 1967.

Age group	Never	Never married		Married		Widowed		Divorced/permanently separated	
	Male	Female	Male	Female	Male	Female	Male	Female	
10 - 14	99.9	99.8	0.06	0.2	0.004	0.02	0.001	0.01	
15 - 19	98.7	89.7	1.2	9.9	0.02	0.1	0.03	0.2	
20 - 24	80.4	51.3	19.2	47.4	0.5	0.4	0.2	0.8	
25 - 29	39.9	20.9	59.4	76.9	0.3	0.9	0.4	1.2	
30 - 34	14.5	9.8	84.4	86.6	0.5	1.9	0.5	1.6	
35 - 39	7.2	5.3	91.4	89.3	0.8	3.4	0.6	1.9	
40 - 44	4.8	3.7	93.1	87.3	1.3	6.5	0.8	2.5	
45 - 49	4.0	2.9	93.1	82.6	1.9	11.5	1.0	2.9	
50 - 54	3.4	2.2	92.1	73.5	3.3	20.4	1.2	3.9	
55 - 59	3.0	1.7	90.6	64.3	5.0	29.0	1.4	5.0	
60 - 64	3.0	1.9	86.7	50.1	8.3	41.8	2.0	6.2	
65 +	3.8	2.1	76.1	29.7	17.2	60.8	2.9	2.9	
Total	50.3	42.0	47.4	48.5	1.7	7.7	0.6	1.8	

Table 116. Proportion of never-married, married and widowed to the population 10 yearsof age and over by age group and sex, Malaysia, 1980

(Per cent)

Source: Calculated from data published in Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

State	Never married	Married	Widowed	Divorced/permanently separated
Peninsular Malaysia				
Male	50.7	47.1	1.7	0.5
Female	42.4	47.9	7.9	1.7
Sabah				
Male	52.5	45.4	1.5	0.5
Female	41.9	52.4	4.3	1.4
Sarawak				
Male	51.6	46.1	1.7	0.5
Female	49.2	44.6	5.0	1.2

Table 117. Percentage distribution of population 10 years of age and over by marital status and sex, Peninsular Malaysia, Sabah and Sarawak, 1980

Source: Calculated from data published in:

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Sabah (Kuala Lumpur, Department of Statistics, 1983).

Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Sarawak (Kuala Lumpur, Department of Statistics, 1983).

the court orders such payment of monthly allowances and the husband refuses or neglects to pay, the court has the power to send the husband to prison for one month for every month's allowance remaining unpaid.¹⁴ In addition, where the husband is employed, the court has the power to make attachment of earnings, orders for the deduction of the maintenance due and payment to the court.¹⁵ No wife is entitled to receive any maintenance or allowance if she is living in adultery, or if without sufficient reason, she refuses to live with her husband.¹⁶ This law does not apply to a person professing the Muslim religion where there is state legislation for the maintenance of wives and of children, legitimate or illegitimate, and for the enforcement of such orders against such persons professing the Muslim. religion.

3. Tax deduction for wife

An individual male resident in Malaysia during the basis year who had his wife living together with him during the whole year is given a tax allowance. If he is divorced or separated from his wife for part of the year, then he is only allowed a proportion of the allowance. Under the Income Tax (Amendment) Act, 1980, a rebate is granted to a person who has been granted a general deduction under Section 46 (1) of the Act, and to a person who has been granted a deduction for a wife under section 47. Working wives are now given the option of paying income tax separately from their husbands. In some cases, this has greatly benefited the family where both the wife and husband are working. This may have the effect of encouraging more married women to work.

F. CONCLUSION

It can be said that in Malaysia the status of women with respect to literacy, educational attainment, employment, marital status and legal protection since the 1970s has gradually progressed towards equality with men. By 1980 female literacy rates had shown steady improvement for both urban and rural women: 75 per cent and 63 per cent, respectively. Educational attainment has tended to depress fertility among females in Malaysia. This, along with the introduction of family planning programmes since 1966 has led to a gradual decline in population growth throughout the country. The electronics, textile and food processing sectors have increased tremendously their recruitment of female workers. With the introduction of the New Economic Policy in 1970, a redistribution of racial composition among the workers was foreseen. This led to disproportions in the employment of Malay female workers in the manufacturing sectors. With respect to job security and occupational mobility, experienced female workers were found to have weak bargaining power due to the availability of cheaply trained female workers.

Legal policies have been introduced to protect the female labour force. These cover maternity benefits, child allowances and separate income tax returns for working wives. With the increasing availability of equal opportunities in all fields, the roles of women in Malaysia have widened, allowing many of them to pursue their economic potential.

¹⁴ Refers to section 3 of Married Women and Children (Maintenance) Act 1950 (Revised 1981).

¹⁵ Refers to section 4 of Married Women and Children (Maintenance) Act 1950 (Revised 1981).

¹⁶ Refers to section 10 of Married Women and Children (Maintenance) Act 1950 (Revised 1981).

X. GROWTH AND ECONOMIC ACTIVITY OF THE

POPULATION*

A. GENERAL DESCRIPTION OF THE POPULATION

In 1980 Malaysia had a population of 13,088,372 persons, of whom 6,564,812 were males and 6,523,560 were females. Those aged 0-14 made up 36.6 per cent and those aged 15-64 made up 56.7 per cent, of the total population. The distribution of Malaysian population by age is shown in table 118.

It can be seen from this table that in 1980 Malaysia had a large proportion of its population in the age group 0-14. As this group of young

Contributed by S. Soman, Department of Statistics.

Table 118. Number and percentage distributionof population by broad age group,Malaysia, 1970 and 1980

		Population		
Age group		Number	Per cent	
0 - 14				
	1970	4 684 501	44.9	
	1980	5 189 214	39.6	
15 - 64				
	1970	5 434 037	52.0	
	1980	7 407 893	56,7	
65 +				
	1970	320 892	3.1	
	1980	491 265	3.7	
Total				
	1970	10 439 430	100.0	
	1980	13 088 372	100.0	

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, vol. II (Kuała Lumpur, Department of Statistics, 1973).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983). persons will be moving into the age group 15-64 during the period 1981-1994, new job opportunities will have to be created for them. Creation of sufficiently large new employment opportunities can only be realized if large-scale investment funds can be mobilized from domestic or foreign sources. However as Malaysia has relatively high birth rates and a developing economy with relatively low levels of per capita income as of 1980, it is very difficult to realize high levels of savings which could be used for job-creating type investments.

In addition, as the females aged 0-14 in 1980 reach the ages 15-29 during the period 1981-1995, birth rates are likely to increase, which will increase the demand for social services such as medical and educational services. It is also clear that a country having relatively high birth rates will use a large percentage of available resources to maintain current levels of consumption. Table 119 shows crude birth rates for Peninsular Malaysia for the period 1947-1980. As the birth rate in Sabah and Sarawak is known to be somewhat higher than that of Peninsular Malaysia, the birth rate of Malaysia as a whole may be much higher than is indicated in the table.

Table 119 also shows that the death rate in Peninsular Malaysia has been declining during the period 1947-1980. Most likely a similar decline in death rates has also been realized in Sabah and Sarawak in recent years. It can also be seen from the table that the relatively high birth rates and low death rates have given rise to a high rate of natural increase in the population. Evidence indicates that the rate of population growth is likely to continue to be relatively rapid during the period 1970-1990.¹

A country having relatively high birth rates and low death rates will also have a relatively high

¹ Malaysia, Population Projections in Single Years, Malaysia, 1970-1990 (Kuala Lumpur, Department of Statistics, 1975), tables 5 and 8.

Year	Crude birth rate	Crude death rate	Rate of natural increase
1947	42.9	19.4	23.5
1957	46.2	12.4	33,7
1967	35.3	7.5	27.8
1968	35.2	7.6	27.7
1969	33.0	7.2	25.8
1970	33.9	7.3	26.6
1971	34.3	7.1	27.2
1972	33.3	6.9	26.4
1973	31.9	6.9	25.0
1974	32.1	6.6	25.5
1975	24.9	6.4	24.9
1976	25.5	6.2	25.5
1977	24.4	6.3	24.4
1978	24.2	5.9	24.2
1979	24.7	5.8	24.7
1980	31.7	5.9	25.8

Table 119. Crude birth rate, death rate and rateof natural increase, Peninsular Malay-sia, 1947-1980

Sources: 1947 and 1957 rates are from Annual Report of the Registrar General on Population, Births and Deaths (Kuala Lumpur, Registration Department, 1947, 1957).

1967-1969 and 1971-1974 rates are from yearly publications of Department of Statistics, Kuala Lumpur.

1970 rate is from 1970 census data, and therefore shows a slight increase over rates derived from the vital registration system.

1957-1979 rates are from Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1981), table 1.00, p. 3.

1980 rate is from Vital Statistics, Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1983).

age-dependency ratio. This ratio shows the burden of dependency which the productive population must bear. Table 120 shows age dependency ratios for Malaysia, Peninsular Malaysia, Sabah and Sarawak.

It can be seen that the burden of dependency is lower in Peninsular Malaysia than in Sabah and Sarawak. This suggests that as the birth rates in Sabah and Sarawak decline to levels prevailing in Peninsular Malaysia, their age dependency rates are

Table 120. Age dependency ratio, Malaysia,1970 and 1980

	Age dependency ratio				
Country/state	1970	1980			
Malaysia	92.4	76.0			
Peninsular Malaysia	91.8	75.0			
Sabah	97.2	81.0			
Sarawak	94.7	82.0			

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1973).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

^a Age dependency ratio is:
$$\frac{P_{0-14}+P_{65+}}{P_{15-64}}$$

likely to decline significantly. Any such decline would in turn reduce the age dependency ratio of Malaysia as a whole. As family planning practice becomes more widely accepted by the Malaysian population during the period 1970-1990, birth rates and so the age dependency ratio of Malaysia as a whole will probably decline. Any decline in the age dependency ratio will in turn free national resources to invest in the country and so generate employment.

In 1980, 33.9 per cent of the population of Malaysia were resident in urban areas. Of this urban population, 35.3 per cent was aged 0-14, while those aged 15-64 made up 61.1 per cent and those aged 65 and over made up just 3.6 per cent. The distribution of urban population by broad age groups for Malaysia as a whole is shown in table 121.

The age structure of the urban population is distinctly different from that of the population as a whole. In urban areas there is a larger percentage of total population in the working age group 15-64. This suggests that birth rates are relatively low in urban areas and that some adults from rural areas are migrating into these urbanized areas. The age structure of the urban population is clearly more conducive to economic growth.

		Populati	ion
Age group		Number	Per cent
0 - 14			
	1970	1 126 463	40.5
	1980	1 571 322	35.3
15 - 64			
	1970	1 567 247	56.4
	1980	2 7 22 9 28	61.1
65 and above			
	1970	86 544	3.1
	1980	158 834	3.6
Total			
	1970	2 780 254	100.0
	1980	4 453 084	100.0

Table 121. Age distribution of gazetted townswith population of 10,000 or more,Malaysia, 1970 and 1980

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1973).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1984).

B. THE MALAYSIAN ECONOMY

The annual real growth rate of per capita gross national product in Malaysia has been estimated at 1.6 per cent over the interval 1971-1980. The rate of growth slowed slightly during the period 1965-1973, probably as a consequence of the declining price of rubber, the main export of the country. Table 122 shows the annual rate of growth in real GNP in Malaysia and a number of neighbouring countries and areas during the period 1971-1980.

The relatively low rate of growth in the real per capita income in Malaysia during this period may be partly explained by the relatively high rates of population growth in the country. Over these years the population of Malaysia is known to have grown at a rate of 2.6 per cent per annum while the rate was only 1.9 per cent for China, 1.7 per cent per annum in the Republic of Korea and 1.6 per cent per annum in Singapore.

It is possible that annual rates of growth in real per capita income in Malaysia during the period 1973-1990 will be more rapid than was realized during the period 1960-1973, as the largescale socio-economic investments begun in the

Country or area	Annual growth rate of per capita income		Growth rate of gross national product								
	1970-1980	1970	1971	1972	1973	1974	1975	1980			
Malaysia	8.1 ^a		6.2	5.8	13.3	7.7	0.5	8.1			
China	9.6	10.9	11.5	11.9	12.0	0.6	2.9	6.8			
Hong Kong	9.4 ^b	5.7	3.3	7.2	13.7	0.8	-	11.7			
Indonesia	7.9 ^a	7.6	7.0	8.3	11.3	7.4		9.9			
Philippines	6.0	6.0	5.9	4.8	9.2	5.0	5.7	4.9			
Republic of Korea	8.7	8.6	9.8	7.3	16.9	8.7	8.0	-3.5			
Singapore	9.6	13.7	12.5	13.4	11.4	6.2	4.2	10.3			
Thailand	6.9	7.3	6.9	4.2	10.5	3.2	6.4	5.8			

Table 122. Growth rate of real per capita income and gross national product, selected Asian countries and areas, 1970-1980

(Per cent)

Source: Asian Development Bank, Annual Report, Asian Development Bank, Manila, various years.

a 1971-1980.

^b 1974-1980.

1960s are likely to bear fruit mainly during the period 1973-1990. The family planning efforts of the 1960s and early 1970s are likely to have changed the attitudes of women, especially in the childbearing age groups, towards size of family, number of children and age of marriage. Declining levels of fertility and the favourable effects arising from infrastructural investments are likely to be realized during the period 1974-1990.

Table 123 shows the contributions of each major sector of the economy to total gross domestic product in Malaysia and a number of neighbouring countries over the years 1965-1981. It can be seen from this table that 33 per cent of Malaysian GDP was contributed by the agricultural sector in 1970. By 1975 however, the share of the agricultural sector had declined to 23.0 per cent. Over the years 1970-1980 the share of the manufacturing sector increased from 13.2 to 18.0 per cent. The share of all other economic activity (mostly services) also increase from 53.8 per cent in 1970 to 59.0 per cent in 1980. Although the share of the manufacturing sector in Malaysian GDP increased from 13.4 to 18.0 per cent over the interval 1970-1980, this still appears to be a relatively small proportion when compared to those of other Asian countries.

In the Republic of Korea, the share of manufacturing industries increased from 19.1 per cent in 1970 to 28.0 per cent in 1980. The industrialization programmes outlined in the Fourth

Malaysia Plan should strengthen the manufacturing sector, increasing its share in GDP to 25 per cent by 1990.

As the economy is modernized, considerable increases in agricultural productivity may be realized, utilizing only a limited number of workers. It is in the processing of raw agricultural products into manufactured or semi-manufactured goods that substantial employment opportunities may be created. The lack of adequately trained manpower however, as well as the limited supply of capital equipment and organizational and marketing capability may continue to hinder the pace of industrialization. This appears to have been the case for Malaysia in 1975. Malaysia had an unemployment rate of 4-7 per cent during the period 1970-1980. One of the main objectives of development planning since 1965 has been to generate new job opportunities so as to fully utilize all or nearly all available labour. It has been recognized by the national planning authorities that a large number of new job opportunities can be created as labour-intensive manufacturing activities are established in the country.

C. CHARACTERISTICS OF THE MALAYSIAN LABOUR FORCE AT THE 1980 CENSUS

Tables 124-128 describe the main characteristics of the labour force in 1980 in Malaysia. They include distribution by sex, by industry and occupation, by employment status and the general

					•							
Country or area	Agriculture					Manufacturing			Other			
	1965	1970	1975	1980	1965	1970	1975	1980	1965	1970	1975	1980
Malaysia	•••	33.0	31.0	23	• • • •	13.2	16.7	18.0	•••	53.8	52.3	59.0
China	2.7	17.6	16.3	• • •	19.9	25.9	27.0		53.1	56.5	56.7	
Hong Kong		2.2	1.8	1	•••	30.8	28.5	27.0		64.5	69.7	72.0
Indonesia		43.6	38.9	26	• • •	8.8	10.4	13.0		47.6	50.7	61.0
Philippines	33.2	32.5	29.1	22	17.5	19.4	20.4	24.0	49.3	48.1	50.5	54.0
Republic of Korea	42.8	31.1	24.5	16	12.0	19.1	28.4	28.0	45.2	49.8	47.1	56.0
Singapore	3.3	2.5	1.7	1	15.3	19.3	21.0	26.0	81.4	78.2	78.3	73.0
Thailand	34.0	30.0	27.5	22	15.5	17.1	20.2	19.0	50.5	52.9	52.3	59.0

Table 123. Share of major sectors in gross domestic product, selected Asian countries,1965, 1970, 1975 and 1980(Per cent)

Sources: Key Indicators of Developing Member Countries of Asian Development Bank, (Asian Development Bank, 1976), table 6. 1980 figures are from World Bank, World Development Report (Oxford University Press, 1984).

Labour force status	Ma	de	Fen	nale	Total		
Labour force status	Number	Per cent	Number	Per cent	Number	Per cent	
In the labour force	3 135 263	66.5	1 530 767	31.9	4 666 030	49.1	
Employed	3 086 831	65.5	1 493 300	31.1	4 580 131	48.2	
Unemployed	48 432	1.0	37 467	0.8	85 899	0.9	
Out of the labour force	1 580 251	33.5	3 265 391	68.1	4 845 642	50.9	
Looking after house	111 852	2.4	1 991 909	41.5	2 103 761	22.1	
Student	1 168 088	24.8	1 084 383	22.6	2 252 471	23.7	
Other	239 801	5.1	151 079	3.2	390 880	4. 1	
Unknown or not reported	60 510	1.3	38 020	0.8	153 747	1.0	
Total population 10 years							
and above	4715514	100.0	4 796 158	100.0	9 511 672	100.0	

Table 124. Status of labour force in population 10 years and above by sex, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

Table 125. Labour force participation rates of population 10 years and above by sex,age group and urban or rural residence, Malaysia, 1980

		Male			Female		Total		
Age group	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
10 - 14	7.6	9.8	9.2	5.4	7.5	6.8	6.5	8.7	8.0
15 - 19	45.0	51.1	48.9	34.8	34.5	34.6	39.9	42.7	41.7
20 - 24	89.4	92.9	91.5	58.8	50.0	53.5	73.5	70.4	71.7
25 - 29	97.4	97.3	97.3	46.8	43.4	44.7	71.7	69.7	70.5
30-34	98.1	97.7	97.9	38.1	43.6	41.5	68.7	70.7	69.9
35 - 39	98.2	97.8	98.0	35.6	48.2	43.7	68.2	73.3	7,1.4
40 - 44	97.7	97.5	97.6	32.4	51.1	44.8	66.2	74.5	71.7
45 - 49	96.5	96.4	96.4	28.1	50.0	42.9	62.7	72.8	69.5
50 - 54	91.2	93.4	92.7	22.9	45.4	38.3	57.3	69.4	65.6
55 - 59	68.7	83.2	78.8	17.5	40.2	33.1	42.4	61.5	55.6
60 - 64	57.2	75.7	70.1	14.7	33.1	27.2	35.0	54.4	48.4
65 +	37.9	56.2	50.4	11.9	23.5	19.4	24.1	40.2	34.8
Total	70.3	69.9	70.1	33.3	36.4	35.3	51.8	53.1	52.6
15 - 64	83.4	85.6	84.8	39.3	43.8	42.2	61.2	64.5	64.0

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

	Ur	ban	Ru	ural	Total		
	Number	Per cent	Number	Per cent	Number	Per cent	
Male						· · · · · · · · · · · · · · · · · · ·	
Employer	75 150	6.6	79 211	3.8	154 361	4.8	
Own account worker	204 238	18.0	797 918	38.7	1 002 156	31.4	
Employee	807 652	71.3	995 451	48.3	1 803 103	56.4	
Unpaid family worker	17 351	1.5	139 108	6.7	156 459	4.9	
Looking for first job	28 7 22	2.6	50 922	2.5	79 694	2.5	
Total labour force	1 133 163	100.0	2 062 610	100.0	3 195 773	100.0	
Female							
Employer	19 622	3.8	25 353	2.4	44 975	2.9	
Own account worker	64 824	12.5	378 047	36.0	442 871	28.2	
Employee	382 001	73.6	403 430	38.4	785 431	50.1	
Unpaid family worker	31 670	6.1	213 811	20.4	245 481	15.6	
Looking for first job	20 591	4.0	29 438	2.8	50 029	3.2	
Total labour force	518 708	100.0	1 050 079	100.0	1 568 787	100.0	
Total							
Employer	94 772	5.7	104 564	3.4	199 336	4.2	
Own account worker	269 062	16.3	1 175 965	37.8	1 445 027	30.3	
Employee	1 189 653	72.0	1 398 881	44.9	2 588 534	54.3	
Unpaid family worker	49 021	3.0	352 919	11.3	401 940	8.4	
Looking for first job	49 363	3.0	80 360	2.6	129 723	2.8	
Total labour force	1 651 871	100.0	3 112 689	100.0	4 764 560	100.0	

Table 126. Employment status of the labour force for population 10 years and over by sex,and urban or rural residence, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

level of labour force participation rates by sex and age separately for urban and rural areas. It is clear from tables 126-128 that the labour force in the country is mainly engaged in agricultural occupations, and that a large proportion of them are either self-employed or are unpaid workers for a family concern. Some of these patterns are likely to change markedly during the period 1970-1990 as the economy becomes more rationalized and the benefits of organized economic planning are realized. However it is impossible to say a great deal about how the occupational and industrial distribution of the labour force is likely to change. It can be said with certainty that the processing of agricultural products, manufacturing and service activities are likely to become relatively more important and the importance of agricultural sector is likely to decrease gradually over time.

Of the slightly more than seven million persons of age 10 years and above who were in Malaysia in 1980, approximately half, or 4,764,560 persons, were classified as being in the labour force. This includes those who were employed and unemployed at the time of the 1980 census. The percentage of persons in the labour force, in this instance 49.1 per cent, is sometimes referred to as the crude activity rate. The other half of the population that was outside the labour force are mainly housewives and students.

Table 124 shows substantial variations in the labour force status by sex. Almost two thirds of all men aged ten years and more were in the labour force, while less than one third of all women were working or seeking work.

	Ma	ale	Fer	nale	Total		
Industry	Number	Per cent	Number	Per cent	Number	Per cent	
Agriculture, forestry, hunting, fishing and agricultural pro-		<u>, , , , , , , , , , , , , , , , , , , </u>	·				
cessing	1 132 392	37.2	722 878	49.1	1 855 270	41.1	
Mining and quarrying	42 467	1.4	4 906	0.3	47 373	1.0	
Manufacturing	357 350	11.7	238 920	16.2	596 270	13.2	
Construction	192 750	6.3	14 787	1.0	207 537	4.6	
Electricity, gas, water and sani- tary services	7 477	0.3	561	0.1	8 038	0.2	
Wholesale and retail trade and restaurants	395 929	13.0	163 845	11.1	559 774	12.4	
Transport, storage and commu- nication services	150 626	5.0	10 064	0.7	160 690	3.6	
Financing, insurance and real estate services	56 331	1.9	23 620	1.6	79 951	1.8	
Community, social and personal services	685 500	22.5	285 704	19.4	971 204	21.5	
Industry not adequately des- cribed elsewhere	21 222	0.7	6 827	0.5	28 049	0.6	
Total experienced labour force	3 042 044	100.0	1 472 112	100.0	4 514 156	100.0	
Not working but looking for first job	42 530	37	30 327	5 1	72 857	12	
Total labour force ^a	3 084 574	100.0	1 502 439	100.0	4 587 013	100.0	

Table 127. Male and female experienced labour force by industry, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

^a Excluding activities unknown and outside labour force.

Table 125 shows labour force participation rates (LFPR) by sex, age group and strata for Malaysia. The labour force participation rate indicates the level of labour force activity among those who could possibly work. It is calculated by dividing the total number in the labour force by the sum of people of working age both within and outside the labour force.

The last two rows of table 125 show two different summary series of rates. The first is based upon the population aged 10 and above, while the second is the LFPR for the age range 15-64. LFPR is always higher for the population aged 15-64 than for the total population above the age of 10. This simply reflects the fact that

participation in the labour force is lower at the younger ages. As noted earlier, LFPR is consistently higher for men (84.4 per cent) as opposed to 42.2 per cent for women. Another important difference revealed by this table is the rural-urban variation in labour participation. For the total population aged 15 to 64, there was a 3.3 per cent difference between the urban and rural labour force participation rates, the latter being the higher. For the population aged 10 and above however, the difference was somewhat narrower. For men, there was a difference of 2.2 per cent between the rural and urban rates, while for women there was a difference of 4.5 per cent (again with a rural bias). This pattern of higher LFPR in the rural areas suggests that the role of

0	Ma	ale	Fer	nale	Το	tal
Occupation	Number	Per cent	Number	Per cent	Number	Per cent
Professional, technical and re- lated workers	187 246	6.2	115 864	8.3	303 110	6.9
Administrative and managerial workers	40 662	1.4	3 681	0.3	44 343	1.0
Clerical and related workers	198 423	6.7	151 334	10.9	349 757	8.0
Sales workers	299 798	10,1	98 634	7.1	398 432	9.1
Services workers	260 514	8.7	122 893	8.8	383 407	8.8
Agricultural, animal husbandry and forestry workers, fisher- man and hunters	1 040 933	34.9	632 010	45.5	1 672 943	38.3
Production and related workers, transport equipment opera- tors and labourers	875 765	29.4	240 918	17.3	1 116 683	25.6
Occupation not adequately des- cribed	75 0 77	2.6	24 851	1.8	99 928	2.3
Total experienced labour force	2 978 418	100.0	1 390 185	100.0	4 368 603	100.0
Not working but looking for first job	42 53 <u>0</u>		30 327		72 857	
Total labour force ^a	3 020 948		1 420 512		4 441 460	

Table 128. Occupation of the experienced labour force for male and female population10 years and over, Malaysia, 1980

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1973).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

^a Excluding activities unknown and outside labour force.

a mother and wife can perhaps be combined with labour force activity more easily in rural than in urban areas. This is perhaps particularly true in the agricultural sector where the hours of work may be more flexible than for instance, in industrial employment.

Table 125 also shows urban-rural participation levels by sex and age. For the youngest age group, 10-14, the rates were very low, approaching 10 per cent only in rural areas, where many young persons were presumably employed in agricultural activities. The rates were substantially higher for the next age group, 15-19, as more youth leave school and enter the labour force at these ages. Rates were higher in rural areas for this age group, possibly because of the lower average schoolleaving age in rural areas. Agricultural activity is often informally organized, and thus there is a somewhat earlier entry into the labour force.

For those aged 20 and above, certain regular patterns emerge. Among adult males in both urban and rural areas, labour force participation rates were above 90 per cent. Early retirements begin to occur by the age of 50, and the male labour force participation rates were lower for each age group thereafter. As might be expected, LFPR among older persons was higher in rural than in urban areas.

For women a different pattern was evident. A peak rate of 58.8 per cent was reached for urban women in the age group 20-24, and rates decreased at older ages, presumably as a result of childbearing and child-rearing duties. However these data only show the situation as of 1980; they do not indicate whether the younger generation of urban women, who are more likely to enter the labour force, will decrease their labour force participation in coming years to the extent that their older sisters and mothers have. For rural women, there were much more stable rates of 40-50 per cent throughout the adult years, with a decrease at the older ages. For a better understanding of the dynamics of the labour force participation of women it would be necessary to consider the effects of marriage and childbearing, an attempt which is beyond the scope of this general review.

Table 126 shows the employment status of the labour force by sex and strata for the entire country. The sum of the first four categories (employer, own account worker, employee, and unpaid family worker) represents the experienced labour force, that is the employed plus the experienced unemployed. These four categories as well as the looking-for-first-job group make up the total labour force aged 10 years and above.

More than half of the total labour force (54.3 per cent) was classified as employees. This reflects the high level of economic development in the country. The proportion of the labour force who were employees, ranged from a high of 73.6 per cent among urban males to only 38.4 per cent among rural women. Employers and those looking for their first job were relatively small fractions of the total labour force, though both were more common in urban areas. Over 4.0 per cent of urban females in the labour force were looking for their first job, a much higher figure than for any other group.

Generally, own-account workers and unpaid family workers are thought to represent the informal sector of the economy, dominated by family enterprises and farms. Of the total labour force in rural areas nearly half fell into these two categories, whereas only slightly more than one out of five workers in urban areas were in these two categories. In addition, the employment status patterns of male and female labour forces were more similar in urban than in rural areas.

Malaysia as a whole is an agricultural nation. This is roughly depicted in table 127 by the large proportion of workers in agricultural industries. Of the 4,514,156 persons enumerated as the experienced labour force in 1980, 1,855,270 persons or 41.1 per cent of them were classified as working in the agricultural sector. (The agricultural labour force includes both agriculture, forestry, hunting and fishing, and agricultural products requiring substantial processing, namely rubber and coconut.)

Of the remaining experienced labour force, the largest proportion comprised workers in the community, social and personal services sector. This accounted for 971,204 persons, or 21.5 per cent of the total. Employment in the manufacturing category and in wholesale and retail trade and restaurants contributed 13.2 and 12.4 per cent, respectively, while smaller proportions of workers were found in the five remaining categories.

Analysis of the distribution of the labour force by sex reveals important differences. Men accounted for 67.4 per cent of the labour force and women represent the remaining 32.6 per cent. All categories employed more males than females. As for the distribution of females by category, the proportion in agriculture was 49.1 per cent, while the corresponding proportion for males was only 37.2 per cent. In the remaining industries the pattern for males followed closely the distribution pattern of the total economy, but that for females showed some variations. Employment for females was particularly small in four categories, mining and quarrying; construction; electricity, gas, water and sanitary services; and transport, storage and communication. Together these industries employed less than 2.0 per cent of the experienced female labour force.

Some caution should be exercised when interpreting data on the industrial distribution of the experienced labour force, as in table 127. A proportion of the labour force either failed to report an industry or reported one which was not clearly described. In table 127, this latter category amounted to 0.6 per cent of the total experienced labour force. In several of the remaining tables in this chapter, the category not adequately described is large, particularly for females.

Table 128 shows that in 1980 38.3 per cent of the total experienced labour force (4,368,603

persons) were classified as agricultural and related workers. Of these, the major portion were workers on paid farms and rubber plantations and holdings.

Workers classified in the category production and related workers, transport equipment operators and labourers accounted for 1,116,683 persons or 25.6 per cent of the labour force. Together with agricultural and related workers, blue collar occupations formed almost 64 per cent of the total labour force.

Professional and technical workers amounted to 3,403,110, or 6.9 per cent of the work-force, while administrative and managerial workers accounted for 1.0 per cent. Clerical and related workers made up 8.0 per cent, and sales and services workers constituted 9.1 per cent.

The distribution patterns of the labour force by major occupational categories are different for males and females. While both distributions show large proportions of agricultural and related workers, the share in female labour force of agricultural workers was much larger than for males. Over 45 per cent of the female work-force were agricultural and related workers, while the corresponding proportion for men was 34.9 per cent.

Men were the majority of workers in all categories, particularly in administrative and managerial, where they constituted 91.7 per cent of all workers. Men also dominated in the categories of sales workers, and production and related workers with over 75 per cent of the total in each.

Of the share of workers in each category, the pattern for men is similar to that of the total population, whereas the distribution for women shows differences. Other than the agricultural and related workers category, which accounted for 45.5 per cent of the female labour force, the proportion of women workers in the remaining categories was small, with 17.3 per cent employed as related workers, 8.8 per cent as services workers and smaller percentages in the other occupational categories.

Though comparable data on the labour force for Malaysia as a whole in 1970 are unavailable tables 129-131 show labour force participation rates for Peninsular Malaysia in 1970 and 1980 in order to give some idea of changes in the labour force that have occurred over time. Labour force statistics for 1970 and 1980 for Peninsular Malaysia are not directly comparable, as the definition of some categories has changed.²

From table 129 it may be seen that LFPR for males aged 10 years and above increased from 65.8 per cent in 1970 to 70.3 per cent in 1980. This has resulted mainly from higher levels of participation among those aged 20-54.

LFPR for females aged 10 years and over increased from 30.6 per cent in 1970 to 33.9 per cent in 1980. Higher LFPR among younger women may be attributed to recent higher educational levels attained by women and the liberation of attitudes towards female employment. A certain degree of under-enumeration of selfemployed women in 1970 partly explains the relatively low level of over-all female LFPR.³

From table 130 it can be seen that the proportion of first-time job seekers increased between 1970 and 1980. This is mainly because the relatively large number of persons born during the years 1960-1970 were entering the labour force by 1980.

Over the interval 1970-1980 the relative share of the experienced labour force who were employees increased from 50.5 to 61.4 per cent. However, the increase was more significant among females than among males. It can also be seen that the share of experienced labour force classified as unpaid family workers was 16.9 per cent in 1970, while in 1980 it was only 7.3 per cent.

Table 131 shows that in 1970, 49.6 per cent of the experienced labour force was employed in agricultural industries, while by 1980 this figure had dropped to 36.4 per cent. This change reflects rapid growth in those categories with a relatively higher capacity to absorb labour, viz. manufacturing; wholesale and retail trade and restaurants; and community, social and personal services. Such a change in industrial distribution of the labour force also indicates the rapid rate of economic modernization and industrialization that has occurred in the country between 1970 and 1980.

² Refer to Khoo Teik Huat, General Report – 1980 Population and Housing Census, vol. II (Kuala Lumpur, Department of Statistics, 1983), p. 581.

³ Refer to R. Chander, General Report – 1970 Population and Housing Census, vol. I (Kuala Lumpur, Department of Statistics, 1977), p. 547.

	M	ale	Fen	nale	Total		
Age group	1970	1980	1970	1980	1970	1980	
10 - 14	9.0	7.5	7.7	5.4	8.4	6.5	
15 - 19	52.3	45.3	33.0	35.3	42.8	40.3	
20 - 24	87.1	89.3	41.9	60.1	64.1	74.2	
25 - 29	93.5	97.5	38.4	47.9	65.7	72.2	
30 - 34	94.4	98.2	39.0	38.9	66.5	69.0	
35 - 39	94.0	98.3	[,] 40.0	36.5	66.4	68.5	
40 - 44	93.2	97.8	40.0	33.0	66.6	66.4	
45 - 49	91.5	96.6	40.7	28.6	65.7	62.8	
50 - 54	86.7	91.4	36.6	23.2	62.0	57.4	
55 - 59	75.6	68.5	29.2	17.8	53.5	42.4	
60 - 64	65.2	57.3	23.7	14.9	45.3	35.1	
65 +	46.0	38.3	12.9	12.2	30.0	24.3	
Total 10 - 65+	65.8	70.3	30.6	33.9	48.2	52.0	
Total 15 - 64	81.3	83.4	37.2	40.0	59.2	61.6	

Table 129. Labour force participation rates for population 10 years and above by age and sex,Peninsular Malaysia, 1970 and 1980

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

D. COMPOSITION AND GROWTH OF POPULATION IN PENINSULAR MALAYSIA, 1911-1980

The population of Peninsular Malaysia is made up of three major ethnic groups, namely Malays, Chinese and Indians. Besides these main groups of people there are a small number of persons from other Asian and from European countries. Attention in this chapter will be focused mainly on Malays, Chinese and Indians.

The native people of Peninsular Malaysia are the Negritoes, the Senois and the Jakuns. In the period before British colonization, the Negritoes were hunters and gathers, "dependent entirely on the jungle and rivers for their livelihood".⁴ The Senois, or Sakais, "had a more

⁴ Ooi Jin Bee, Land, People and Economy in Malaya (London, Longman, 1969).

advanced economy than the Negritoes and practiced shifting cultivation in addition to hunting and food gathering". The Jakuns "had a culture akin to that of the lowland Malays. Many of them practiced shifting cultivation while some tribes settled in fishing villages". A large number of Jakuns "were assimilated into the Malay groups".⁵

It has been roughly estimated that there were 9,000 aborigines in 1839. Besides these, there were lowland Malays in the Malay peninsula. Ethnically, lowland Malays resemble the Malays of Indonesia. "They settled along the many river banks of Peninsular Malaysia. When these Malays first found their way to the peninsula by land and sea from Indonesia the river mouths were always the foci of settlements".⁶ Subsequently their

⁵ Ibid.

⁶ Ibid.

<u> </u>		N	lale			Female				Total			
Employment status	1970		19	1980		70	1980		1970		1980		
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	
Employer	• • •	• • •	113 599	4.4	•••		36 927	3.0		• • •	150 526	4.0	
Self employed/own account workers	694 243	37.0	740 184	28.9	198 243	23.1	299 354	24.4	892 486	32.6	1 039 538	27.4	
Unpaid family worker	186 856	10.0	126 079	4.9	276 066	32.2	149 122	12.1	462 922	16.9	275 201	7.3	
Employee	996 647	53.0	1 584 800	61.8	384 300	44.7	743 037	60.5	1 380 947	50.5	2 327 837	61.4	
Total experienced labour force	1 877 746	100.0	2 564 662	100.0	858 609	100.0	1 228 440	100.0	2 736 355	100.0	3 793 102	100.0	
Looking for first job	80 542		35 553		54 052		26 526		134 594		62 079		
Total labour force	1 958 288		2 600 215		912 661		1 254 966		2 870 949		3 855 181		

Table 130. Employment status of the experienced labour force by sex, Peninsular Malaysia, 1970 and 1980

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

	Ma	ale	Fen	nale	Total		
Industry	Number	Per cent	Number	Per cent	Number	Per cent	
Agriculture, forestry, hunting and fishing	850 577	33.2	531 863	43.3	1 382 440	36.4	
Mining and quarrying	39 7 9 1	1.6	4 225	0.4	44 516	1.2	
Manufacturing	323 529	12.6	228 164	18.6	551 693	14.5	
Construction	167 235	6.5	13 682	1.1	180 917	4.8	
Electricity, gas, water, sanitary services	5 776	0.2	423	0.1	6 199	0.2	
Wholesale and retail trade and restaurants	353 841	13.8	144 307	11.7	498 148	13.1	
Transport, storage and commu- nications	132 335	5.2	8 602	0.7	140 937	3.7	
Financing, insurance and real estate services	50 974	2.0	21 265	1.7	72 239	1.9	
Community, social and personal services	578 810	22.6	246 719	20.1	825 529	21.8	
Activities inadequately described	18 972	0.7	6 189	0.5	25 161	0.7	
Activities unknown	42 822	1.6	22 501	1.8	65 323	1.7	
Total labour force	2 554 662	100.0	1 228 440	100.0	3 793 102	100.2	
Looking for first job	35 553		26 526		62 079		
Outside labour force	1 185 332		2 597 902		3 783 234		
Total	3 785 547		3 852 868		7 638 415		

Table 131. Labour force by sex and industry, Peninsular Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

settlement spread upstream and along the cost. "The Malays followed a simple subsistence economy founded on padi cultivation, with fish as their main supplement".⁷ Newhold has estimated that there were about 280,680 Malays in the peninsula during the period 1835-1836. The Pribumi as we know them today are made up of Malays, Indonesian, Negrito, Jakun, Senoi, Semang, Tamiar and other aborigine. In 1931 and 1947, the migrant components of this category were about 15 and 12 per cent, respectively.⁸

Of those who claimed to be Malay in the Federation of Malaya in 1947, five persons out of

every 1,000 were not born in the country.⁹ They were mainly born in Indonesia, and to a lesser extent in Thailand. What is interesting is that a gradual assimilation of Malaysians into the Malay racial group has occurred. It is known that large numbers of migrants of Islamic faith from Indonesia and Thailand as well as persons of aboriginal origin have seen assimilated into the Malay community. While it is true that "the Malays themselves are to a large extent, descended from the Malays of the East coast of Sumatra from whom they are ethonographically indistinguishable",¹⁰ it is clear that a large percentage of Malays were in fact born within the Federation by 1947.

⁷ Ibid.

⁸ D.Z. Fernandez, A.H. Hawley and S. Pridaza, *The Population of Malaysia*, Research Paper No. 10 (Kuala Lumpur, Department of Statistics, 1976).

⁹ Federation of Malaya, Census Report of the Federation of Malaya, 1947.

¹⁰ Ibid.

This implies that the Malays migrated into the region well before the Chinese and Indians.

"The migration of people of Malay stock from Indonesia to Malaya has been going on for centuries. Most of them were from Java. Sumatra and Celibes as well as from Bawean. The immigrants from Sumatra intermarried freely with the Malays already settled in Malaya",¹¹ while other Indonesian migrants assimilated into the local Malay population more slowly. It has also been estimated by Vlieland, the superintendent of the 1931 census that "some 244,000 of the 594,000 enumerated in the Federated Malay States in that year were either new Indonesian immigrants or descendants of immigrants who entered the country between 1891 and 1931".¹² Table 132 shows that about 88,000 Indonesians who settled in Malaya came during the years 1900-1940.

Vlieland also pointed out that "a very large proportion of the Malay population consists of recent immigrants and a still larger fraction cannot claim pure Peninsular decent for any considerable number of generations".¹³

The population of Peninsular Malaysia increased from 3,787,758 in 1931 to 4,908,086 in 1947.¹⁴ Most of the increase for this intercensal period was due to natural increase. Both Malayan legislation and various pieces of Indian legislation placed restrictions on Chinese and Indian migration during the period 1930-1947.

It is clear that population growth in Malaya during the period 1911-1941 was primarily determined by the level of immigration. During the period 1947-1975 it was the relatively high fertility rates and low mortality rates that attributed to the momentum of population growth in Peninsular Malaysia. These demographic trends exerted considerable pressure on the individual family, as the increase in the number of dependent children has made their accommodation more difficult and their financial support a greater strain. Such strains on the family might be expected to put strong pressure on parents to restrict the size of their families.

Some have argued that during the period 1956-1958, a major fertility transition had already begun. In spite of such a conclusion it was still felt that population would grow at an annual average rate close to 3 per cent over the period 1956/57-1976/77. In Malaysia, a combination of factors, such as a reasonably well-educated population, rapid rates of urbanization and high and rapidly increasing levels of per capita income have encouraged and will ensure substantial reductions in fertility, especially over the period 1976/77-1990/91.

Over the interval 1947-1957, the population of Peninsular Malaysia increased from 4,908,086 to 6,278,758 persons, of whom 49.8 per cent were Malays, 37.1 per cent were Chinese, 11.1 per cent Indians and 2.0 per cent others. By 1957 there was a marked tendency on the part of all people in Peninsular Malaysia to settle permanently in the

State/settlement	1910 or earlier	1911-1920	1921-1930	1931-1940	Total
Singapore	1 000	2 000	4 000	6 000	13 000
Johore	4 000	10 000	12 000	7 000	33 000
Selangor	3 000	7 000	6 000	4 000	20 000
Perak	3 000	4 000	3 000	2 000	12 000
Other states	2 000	3 000	3 000	2 000	10 000
Total	13 000	26 000	28 000	21 000	88 000

Table 132. Migrant Indonesians by year of first arrival in Malaya, ca. 1900-1940

Source: Ooi Jin Bee, Land, People and Economy in Malaya, (London, Longman, 1969).

¹¹ Ooi Jin Bee, op. cit.

¹² Ibid.

¹³ Ibid.

¹⁴ D.Z. Fernandez, A.H. Hawley and S. Pridaza, op. cit.

country. This tendency was reflected in the fact that 74.7 per cent of Chinese were born in the country. The corresponding proportions for Malays and Indians were 96.9 and 62.1 per cent, respectively.

The migration of Chinese and Indians into Peninsular Malaysia is well documented.¹⁵ The early Chinese and Indian migrants did not intend to make their stay in Peninsular Malaysia a permanent one. Many of them intended to and in fact did return to their home country after a period of work in Peninsular Malaysia. These early Chinese and Indian migrants were young males who were attracted to Peninsular Malaysia by the opening up of the tin and rubber industries. These Chinese and Indian migrants seldom mixed with the indigenous people, mainly because the areas of tin mining and rubber cultivation were geographically separated from the centres of Malay population. "Most of the tin mines and rubber plantations have been away from the concentrations of Malay settlement along the coast and the lower reaches of the main rivers, custom and land law also fostered a division, on racial lines, between urban, plantation and mining areas and those practicing traditional agriculture".¹⁶

By about the end of the 1920s, labour for the production of exports of the Malay peninsula was largely provided by male immigrants. Males tended to predominate in the society. A balance between the sexes was attained during the 1930s when the Malayan Government restricted the immigration of males,¹⁷ but encouraged the arrival of female migrants. Large numbers of Chinese women migrated to Malaya in the late 1930s. partly owing to the outbreak of the Sino-Japanese War in 1937.¹⁸ In the post-war years, the "occurrence of the Emergency reinforced the tendencies towards demographic stabilization, and in the following years well over a hundred thousand Chinese emigrated, of whom the great majority were males". The major factor however, leading to the stabilization of the Chinese and Indian societies has been the birth of Chinese and Indian children in Peninsular Malaysia who became members of

18 Ibid.

the larger society. This led to a significant improvement in the sex ratio of both the Chinese and Indian communities. The fact that many Chinese migrants made the Malay peninsula their permanent home over the years 1931-1947 was substantiated by the fact that in 1931 only 3 per cent of all Chinese were recorded as born locally, while by 1947, 62.5 per cent of the Chinese in the Malay peninsula were born in the country.¹⁹ By 1970 only about 12 per cent of the Chinese in Peninsular Malaysia were recorded as not born in the country.

By 1980 the population of Peninsular Malaysia had increased to 11,426,613 persons, of whom 56.0 per cent were Malays, 33.4 per cent were Chinese, 10.0 per cent were Indians and 0.6 per cent were others. By 1980, a large percentage of the Chinese and Indian populations in Peninsular Malaysia had been born there.

In 1980, the structure of the population of Peninsular Malaysia can be said to be relatively young in the sense that those aged 0-14 made up 39.6 per cent of the total population, while those aged 15-64 and 65 and over made up 56.6 per cent and 3.8 per cent, respectively, of the population. The total dependency ratio in 1980 was 75.0.

E. POPULATION TRENDS IN SARAWAK, 1939-1980

Table 133 shows the distribution of the indigenous population of Sarawak for the years 1939, 1947, 1960, 1970 and 1980.

1. Ibans (Sea Dayaks)

The Ibans are known to have migrated from Kalimantan at the beginning of the nineteenth century. At present "the Ibans are . . . spread widely throughout rural Sarawak." They are to be found mainly along the Lapar and Rejang River Systems. The Sea Dayaks are "... a largely pagan, farming people centered in the second and third divisions".²⁰

2. Malays

"The present day 'Malay' population of this area comprises indigenous coverted to Islam and

¹⁵ Ooi Jin Bee, op. cit.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁹ *Ibid.*

²⁰ Census report for Sarawak, 1960.

		(Per cent)			
	1939	1947	1960	1970	1980
Iban (Sea Dayak)	46	48	47	42.9	29.8
Malay	26	25	26	27.9	20.1
Melanau	10	9	9	8.2	5.7
Bidayuh (Land Dayak)	10	11	11	13.1	8.5
Other indigenous	8	7	7	7.9	13.9
Chinese		• • •	•••		29.2
Others	• • •				1.4
Total					
Per cent	100	100	100	100	100
Number	361 676	395 417	507 252	638 211	1 235 553

Table 133. Distribution of population by ethnic group, Sarawak, 1939-1980

Sources: R. Chander, Population and Housing Census of Malaysia, 1970 State Population Report Sarawak (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, Population and Housing Census of Malaysia, 1980 State Population Report Sarawak (Kuala Lumpur, Department of Statistics, 1983).

the Malay ways of life . . ." The Malays form slightly more than one quarter of the indigenous population of the State. "The Malays . . . live in towns and along the coast where they have been a powerful influence for centuries . . ."²1

3. Land Dayaks (Bidayuhs)

The Land Dayaks or Bidayuhs are concentrated in the districts of Lundu, Bau, Kuching and Serian. "They are less aggressive, adventurous, ambitious and adaptable than the Iban and they have been much slower to adjust to new external influences..."²

4. Melanaus

The Melanaus "are primarily people of the low lying coastal plains of the Third and Fourth Division".²³ Traditionally, they have produced sago, but in more recent years large numbers of them are employed. There is some evidence that in recent years, a considerable number of Melanaus have become Muslims and so have been classified as Malay in the 1960 census.

5. Other indigenous groups

Other indigenous groups include Kenyuh, Kayan, Kadazan, Murut, Kelabit, Bisayah, Punan and others. They accounted for 172,100 people in 1980.

6. Chinese

The Chinese made up 29.2 per cent of the total population of Sarawak in 1980. They are essentially urban dwellers, and over 3/5 of the Chinese population in Sarawak are in the three largest towns and their immediate surroundings. It is evident that gold-mining at Bau in Sarawak attracted some Chinese as early as the 1940s. Economically they were of great importance. By 1960 they had become shopkeepers, traders, smallholders and market gardeners. Table 134 shows the distribution of Chinese in Sarawak during the years 1939-1980.

F. POPULATION TRENDS IN SABAH, 1921-1980

Table 135 shows the total population of Sabah in 1921, 1932, 1951, 1960, 1970 and 1980 for the indigenous and Chinese populations. The indigenous population is made up of the Dusun, Bajau, Murut and others, or the Pribumi. Included in others here are the Orang Sungai, Brunei and

²¹ Ibid.

²² J.C. Jackson, Sarawak: A Geographic Survey of a Developing State (London, University of London Press, 1968).

²³ Ibid.

Vegr	Total Chinasa nonvertion	Increase		
		Number	Per cent	
1939	123 626			
1947	145 158	21 532	17.4	
1960	229 154	83 996	57 <i>9</i>	
1980	360 553	131 399	57.3	

Table 134. Chinese population, Sarawak, 1939-1980

Sources: R. Chander, Population and Housing Census of Malaysia, 1970 State Population Report Sarawak (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, Population and Housing Census of Malaysia, 1980 Population Report Sarawak (Kuala Lumpur, Department of Statistics, 1983).

Year	Total population	Growth rate	Indigenous	Chinese	Other
1921	263 252		203 041	39 356	20 955
1931	277 476	5.4	205 218	50 056	22 202
1951	334 141	20.4	243 009	74 374	16 758
1960	454 421	36.0	306 498	104 542	43 381
1970	651 304	44.0	563 029 ^a	138 512	36 882
1980	955 712	46.7	792 043	155 304	8 365

Table 135. Population by ethnic group, Sabah, 1921-1980

Sources: R. Chander, Population and Housing Census of Malaysia, 1970, State Population Report Sabah (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, Population and Housing Census of Malaysia, 1980, State Population Report Sabah (Kuala Lumpur, Department of Statistics, 1983).

^a Including Indonesian.

Kadazans, Bisayah, Sulu, Tidong and Sino-native. While the indigenous population accounted for 67.5 per cent of the total population in Sabah in 1970, by 1980 they formed more than 82.9 per cent.

The Dusun are predominantly farmers. They are concentrated towards the north-west of the country and engage mainly in rice cultivation. The rate of growth of this community was very gradual during the period 1921-1951, but has increased rapidly since 1951.²⁴

"The Bajaus are the second biggest native community and are concentrated in the west from Kudat to Papar and the Lahad Datu-Semporna area on the east coast".²⁵ They are mostly farmers or fishermen. Table 136 describes the distribution

²⁴ Census report for Sabah, 1960.

²⁵ Ibid.

	Per cent distribution	
Table 136. Distribution of	f population by ethnic group, Sabah, 1921-1980 (Per cent)	
rt for Sabah, 1960.	26 <i>Ibid.</i>	

	Per cent distribution					
	1921	1931	1951	1960	1970	1980
Dusun	51.6	53.8	48.5	47.4	42.6	•••
Murut	14.9	11.9	7.7	7.2	7.2	82.9
Bajau	15.5	15.4	17.1	18.2	18.1	•••
Brunei and Kadazan	5.8	6.9	9.2	10.2	• • •	
Other indigenous	12.2	12.0	17.5	17.0	32.2	
Chinese	• • •	• • •	• • •	• • •	• • •	16.2
Indian		• • •	• • •		•••	0.6
Other	• • •		• • •	• • •	• • •	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sources: R. Chander, Population and Housing Census of Malaysia, 1970, State Population Report Sabah (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, Population and Housing Census of Malaysia, 1980, State Population Report Sabah (Kuala Lumpur, Department of Statistics, 1983).

Note: Some figures do not add to the indicated sum owing to rounding.

of the main indigenous population and its growth during the years 1921-1980.

The Chinese form the majority of the immigrant population in the country. They began to arrive in large numbers from the middle of the 1800s onwards, to meet the labour needs of colonial enterprises. By 1921, there were about 39,256 Chinese in Sabah, making up 15.0 per cent of the total population. By 1960, their numbers had increased to 104,542 persons and then accounted for 23.0 per cent of the total population. In 1980 there were 155,300 Chinese in Sabah, accounting for only 16.2 per cent of the total population. ". . They control many of the smaller scale commercial enterprises and also supply many of the skilled artisans". In Sabah about 46 per cent of Chinese live in urban areas.

XI. POPULATION GROWTH AND EDUCATIONAL DEVELOPMENT*

INTRODUCTION

Rapid population growth affects the development of education in a country in many ways. It makes great demands on the country's resources for the provision of educational facilities, which must cater to the increasing number of children of school-going age. When these youths enter the labour market, employment opportunities must be provided for them. Further, rapid population growth rates also require the expansion of other basic amenities such as health and social services.

In recent years, developing countries have been compelled by rising demand to allocate higher percentages of their budgets to education. Most citizens are aware now of the importance of education not only as an avenue for social mobility, but also as a basic human right. As a consequence, many developing countries have paid great attention to the provision of educational facilities. This has been not only to handle the increasing number of school-age children, but also to increase the number of years of education that they receive.

Liu¹ has suggested two variables to reflect the educational development of a country. The first measure is the adult literacy rate, which is the percentage of population aged 15 and over who can read and write; the second measure is the school enrolment ratio, which is defined as the ratio of the number of pupils enrolled in primary and secondary schools per 100 persons in the population aged 5-19 (adjusted for the normal duration of schooling in the particular country).

Using these two measures, the educational achievement level of various countries can be categorized as: (a) most advanced, (b) less advanced or (c) least advanced. The educationally most advanced countries have literacy rates in excess of 85 per cent and enrolment ratios in excess of 75 per cent. Educationally less advanced countries have adult literacy rates of at least 50 per cent or school enrolment ratios of no less than 50 per cent, or both. Less than half the population of the educationally least advanced countries are literate and less than half of school-age children are enrolled in school. It should also be noted that the literacy rate is a measure of the comulative effects of the educational system of a country, while the school enrolment ratio is a measure of the present coverage of the system.²

To attain higher rates of adult literacy and school enrolment ratios, developing countries must allocate large amounts of resources to education, the effects of which action may be nullified by rapid population growth. Many countries spend more on education each year to provide the same level of education to an increasing number of children. The problem of educational provision is further intensified by the high youth-dependency ratio in the developing world.³ In spite of these problems, many developing countries have made great efforts to provide education to as many children as possible, and for as many years of schooling as resources allow.

Berelson is impressed by the progress made in education by the world in the last two decades, and has said, "rapid population growth will not prevent further progress but it will raise social costs, lengthen the time, dilute the quality and delay the progress toward goals of popular education, and especially for girls subordinated in this regard by the traditions of countries."⁴

^{*} Contributed by T. Marimuthu, University of Malaya.

¹ B. Alfred Liu, 'Population and educational development', Annals of the American Academy of Political and Social Science, vol. 371 (January 1967), pp. 109-120.

² Gavin Jones, Population Growth and Education Planning in Developing Nations (New York, John Wiley and Sons, 1975).

 $^{^3}$ Youth dependency ratio is defined as the ratio of the population below age 15 to the population in the working age group 15-64.

⁴ Bernard Berelson of the Population Council in his foreword to Gavin Jones, op. cit.

Malaysia, which falls in the middle category of educationally less advanced countries, has made great progress in the provision of mass education since independence in 1957. An examination of the influence of population growth on educational development in the past may help to understand the development of education as a whole and to make reasonable predictions about further trends in Malaysia. (The focus however, will be on Peninsular Malaysia, as data for Sabah and Sarawak are incomplete.)

A. THE EDUCATIONAL SYSTEM

Two distinct periods of growth should be distinguished in the development of the educational system in Peninsular Malaysia. The first is the colonial period since 1874, and the second is the post-independence period from 1957.

1. The colonial period

Prior to British intervention in the Malay states in the 1870s, the elementary education provided came mainly through the efforts of missionaries and private organizations. The education received by Malay children was mainly religious instruction from the Koran. Koranic schools were run by religious leaders or the imam of the local mosque. In these schools, Malay pupils learned Arabic script as they studied the religion. They also learned to read and recite verses from the Koran. These Koranic schools were the base on which the colonial Government built a system of formal schooling for Malays.

The education of Chinese and Indian children was left to the initiative of the respective communities. The Chinese organized their own schools and Indian children attended schools established by missionaries and philanthropists. English schools were also established through the efforts of missionaries.

Two parallel systems of education existed during the colonial period. The first was the vernacular education system, with three types of schools, each having a different medium of instruction: Malay, Chinese and Tamil. Generally, each ethnic group attended the respective language medium primary school, where the child's mothertongue was the language of instruction. The other was the secular, or English school system which catered mainly to the children of the urban middle class of all races.

The aim of Malay vernacular education was the "bestowal of an elementary education such as would enable a villager to keep his simple records and to protect himself against petty swindlers", and to make the sons of fishermen or farmers more intelligent and better fishermen or farmers than their fathers. Thus, the Malay school was closely identified with its social environment, and the curriculum had a rural content. The Chinese and Tamil vernacular schools had been neglected. The official thinking at that time (around the turn of the century) was that there was little reason for the Government to "educate children to make them citizens for China or Southern India".⁵

The privately owned and managed Chinese schools were modelled along the village patterns of China, and became the pride of their respective communities. These schools taught the Chinese classics by heart and the use of the abacus. The revolution in China in 1911 had an impact on studies in these schools, serving to the curriculum. In 1920 a single dialect, Mandarin, replaced the variety of regional dialects as the medium of instruction. Teachers and textbooks were imported from China and, therefore, the course contents were oriented towards China.

After 1923, Chinese schools were allowed to apply for grants-in-aid from the Government on condition that they would allow inspections from time to time. In 1952, the grants-in-aid were replaced by salary contributions for the staff, in exchange for which the schools were required to follow prescribed curricula, to charge approved fees and to teach both Malay and English as additional languages. Most of the Chinese schools were elementary schools, except for a few secondary schools.⁶

Tamil schools were also privately owned until the introduction of the Labour Code in 1912. Under this law the owner of a rubber plantation was obliged to provide a school and staff if five or

⁵ Quotations in J.S. Nagle, Educational Needs of the Straits Settlements and Federated Malay States (Baltimore, 1928), p. 106.

⁶ In 1938, there were 287 assisted Chinese primary schools, 36 assisted secondary schools, 709 private primary schools and no private secondary schools.

more children of his employees were between the ages of 7 and 14. Most Tamil schools provided a basic four-year course, and there were no secondary schools at all. From 1923 these schools received small grants from the Government if they complied with the Labour Code. Just as the Chinese schools looked towards China, Tamil schools looked towards southern India for textbooks, teachers and for inspiration. The curriculum had a rural bias like that of the Malay schools.

English schools were initially established through the efforts of the missionaries and of local communities. The first English school founded in Malaya was the Penang Free School; it was established through the initiative of the chaplain of the Settlement of Penang in 1816. The aim of the institution was "to provide for the education of such children as would otherwise be bred up in idleness and consequent vice" and to train intelligent, diligent and honest servants.⁷

The Malacca Free School was founded in 1826. Owing to the financial difficulties experienced by the trustees, it was taken over by the Government in 1879 and renamed the Malacca High School; however, the intention to upgrade it to a secondary school did not materialize until after 1908. Nevertheless, the Malacca Free School was the first to become a government secondary school. Similarly, Penang Free School became a government school in 1920 and was upgraded to a secondary school in 1928. When these free schools became separate government secondary schools, "feeder" primary schools were established, and the pupils in these schools were selected for the secondary schools by a competitive examination. In 1905, the Government established the Kuala Kangsar Malay College to educate Malays so that they could enter the colonial administrative service.

Parallelling the development of government English schools, Christian missionaries, especially the Catholic Christian Brothers and the American Methodist Church established English schools throughout the country. These missionary schools were not divided into separate primary and secondary components until after 1959.

The aim of the English educational system was to produce a corps of recruits for the clerical service and other subordinate appointments in the Government and in the mercantile houses. The content of the education provided was dictated by these aims. The ease with which English-school pupils gained employment led to high demand and to limitations in the number who were able to continue in the system beyond the elementary level.8 However, over the years the number of candidates appearing for the Cambridge School Certificate Examination (introduced in 1891), and for the Queen's Scholarships Examination (established in 1886) increased steadily. Both these examinations were introduced with the objective of encouraging secondary education. The requirements of these examinations, especially those of the Cambridge Local Examination, influenced the curriculum more than any other factor. The possession of a school certificate had some kind of commercial value, because it provided the opportunity for a white collar job and a better future.

The educational system of Malaya that has been outlined so far persisted until the outbreak of the Second World War in 1941. During the war years the whole educational system collapsed, except for a few sporadic attempts by the Japanese to start schools in the Japanese medium.

2. Post-independence period

After the war, Malaya was caught up in the rising tide of nationalism which swept over southeast Asia at that time. Demands for selfgovernment and independence gained momentum and Malaya achieved independence in 1957. The disparate elements which characterized the educational system of the pre-war period were inconsistent with the efforts of building a nation and unifying the various ethnic groups in the country. Hence, a coherent national system of education had to be evolved.

In 1950, the Government appointed a committee (known as the Barnes Committee, after its Chairman, L.J. Barnes) to study education in the country. This Committee recommended the establishment of national schools in which Malay or English would be the medium of instruction.

⁷ D.D. Chellial, Short History of the Educational Policy of the Straits Settlements (Kuala Lumpur, 1947), p. 37.

⁸ H.A. Wyndham, Problems of Imperial Trusteeship (London, 1933), p. 205.

The Committee also recommended the withdrawal of state and federal financial aid to Chinese and Tamil schools. The publication of the report led to a furore in the Chinese community, and strong objections were expressed in the Chinese press. In 1951, in order to placate Chinese feelings, the Government appointed a two-member committee, comprising William P. Fenn, an American, and Wu Teh-Yao, a United Nations official, to study Chinese education in Malaya. The Fenn-Wu Report suggested that the Chinese schools should not be eliminated. It recommended however, that the Chinese schools should teach English and Malay, thus making Chinese school students trilingual. In any event, the Government did not act on either the Barnes report or the Fenn-Wu Report.

In 1955, a Special Committee was set up by the Government under Tun Abdul Razak (then Minister of Education) to review existing educational policy with a view to establishing a national system of education which would be acceptable to the people of the country as a whole. The review was made giving due regard to the government intention to make Malay the national language of the country, whilst preserving and sustaining the growth of the languages and cultures of the other communities living in the country. The Razak Committee Report was finalized in 1956, and the recommendations contained therein were implemented through an Educational Ordinance in 1957.

One of the most important recommendations of the Razak Report was the establishment of two types of primary schools:

(a) Standard primary schools, where the medium of instruction would be Malay, with English as a compulsory subject;

(b) Standard-type primary schools, where the medium of instruction would be Mandarin, Tamil or English, with Malay and English as compulsory subjects.

At the secondary level there were to be only two media of instruction, i.e. Malay or English, with English or Malay as compulsory subjects. Pupils from the standard-type primary schools would be able to enrol themselves in these secondary schools after attending a one-year remove class. Provisions were also made for the teaching of vernacular languages if there were more than fifteen pupils.

Promotions in the primary schools were to be automatic, and there would be a selection examination for the secondary school, known as the Malayan Secondary School Entrance Examination (MSSEE). The MSSEE was to be taken at the end of the six-year primary school course. The Committee also recommended a Lower Certificate of Education (LCE) to be taken at the end of three years (or four years for those from remove classes⁹) in secondary school. Another important recommendation of the Committee was to introduce a common syllabus and timetable for all schools at all levels, and to recognize and develop technical education in view of the future industrialization of the country.

In 1960, the Rahman Talib Committee was appointed to review the educational system since 1956. This review put forward recommendations to raise the school-leaving age to 15 years and to introduce a universal and free primary education system. As a result of these recommendations, school fees were abolished for primary schools in 1962. In 1964, the MSSEE was abolished. In the following year a more comprehensive system of education, under which the school-leaving age was raised to 15 years, was introduced; this provided a minimum of 9 years of education to every child.

The introduction of the comprehensive system was based on the twin objectives of providing equality of educational opportunity for all children, and to meet the growing manpower needs of the country. The notion of gearing the educational system to serve the needs of the economy was not widely held during the colonial period. The colonial education policy was to provide functional literacy, so that the labour force would be more efficient and reliable. This was evident especially with regards to the provision of education for the children of plantation workers. Thompson, writing on education in the plantations in the colonial period, states that "the educational policy of the planter class is to insure that the children of the plantation laborers will remain plantation laborers. If education there must be,

⁹ Pupils changing the medium of instruction at the secondary level, either to English or Malay, spend an additional year in the remove class.

let it be an education designed to make hewers of wood and drawers of water better hewers of wood and drawers of water".¹⁰

B. POPULATION GROWTH, 1911-1980

The economic development of the country during the colonial period should be discussed in the context of the rapid growth of the immigrant population. The development and expansion of the rubber and tin industries, especially at the turn of the century, brought about an influx of Chinese and Indian immigrants into the country. Table 137 shows the growth of the population since 1911.

As indicated in the table, the population of Peninsular Malaysia has grown at a rapid rate. The population grew from 2,339,051 in 1911 to 8,809,557 in 1970, increasing at an average rate of 2.2 per cent annually during this period. In 1980, the population of Peninsular Malaysia increased to 10,944,844, implying an average annual growth rate of 2.6 per cent over the period 1971-1980. During the years 1911-1931, the average growth rate was 2.4 per cent; it then declined to 1.6 per cent over 1931-1947. The rate increased however, 2.4 per cent for 1947-1957 and then to 2.6 per cent for 1957-1980. The highest rate of growth was recorded during the last intercensal period.¹¹ This high annual growth rate was the cumulative effect of massive immigration prior to the Second World War, and of natural increase in the country.

Structural changes in the population for the years 1911-1980 can also be seen in table 137. For Peninsular Malaysia, the percentage of those aged 0-14 increased steadily from 22.6 per cent in 1911, to 44.0 per cent in 1970. However, this figure declined slightly in 1980. While the youngest age group doubled its share in the total over the period 1911-1970, the proportion in the working age group decreased from 73.0 per cent to 52.9 per cent over the same period. Nevertheless, by 1980 the proportion in the working age group increased somewhat to 57.2 per cent, reflecting the beginning of a more stable population structure. This observation notwithstanding, the demographic pattern does show the predominance of

Year	0-14	15-64	65+	Total population	Per cent change
1911 ^a	22.6	73.0 ^b	4.4 ^c	2 339 051	
1921	29.4	65.0 ^b	5.6 ^c	2 906 691	24.3
1931	32.1	63.1 ^b	4.8 ^c	3 787 758	30.3
1947	39.9	57.3	2.7	4 908 086	29.6
1957	43.8	53.4	2.8	6 278 758	27.9
1970	44.0	52.9	3.1	8 809 557	40.3
1980	39.0	57.2	3.8	10 944 844	24.3

Table	137.	Distribution of total population by broad age group, Peninsular
		Malaysia, 1911-1980

(Percentage)	1	(Percentage)	
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Sources: Dorothy Z. Fernandez, Amos H. Hawley and Silvia Pridaza, The Population of Malaysia, Research Papaer No. 10 (Kuala Lumpur, Department of Statistics, 1976).

1970 General Report - Population Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1977).

1980 General Report - Population Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1984).

^a Percentage distribution by age group is only for the population of Federated Malay States, which totalled, 1,009,781.

^b Age group 15-54.

c Age group 55+.

¹⁰ Edgar T. Thompson "Comparative education in colonial areas with special reference to plantation and mission frontiers", *American Journal of Sociology*, vol. 40, No. 6 (May 1943), p.710-721.

¹¹ R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977), p. 296.

youth in the population of Peninsular Malaysia, suggesting the heavier educational and social burden the country must bear in the future.

C. STRUCTURE OF THE EDUCATIONAL SYSTEM

The educational system in Peninsular Malaysia is divided into four stages as follows:

(a) Primary stage: standards I to VI;

(b) Lower-secondary stage: forms I to III;

(c) Upper-secondary or post-comprehensive stage: forms IV to V;

(d) Post-secondary stage: form VI lower and upper.

A pupil who enters the educational system at the age of six years can have an uninterrupted education for nine years, if he or she desires it. At the primary stage, education is free. Primary education is provided in one of three languages media, namely Malay, Chinese and Tamil.¹² Promotion is automatic during the primary stage, but the child sits for two centrally administered examinations. At Standard III, a diagnotic test is administered in order to identify areas needing remedial work at an early stage. The Standard V Assessment Examination is conducted to measure pupils' attainment so that efforts can be made to correct their weaknesses in the final year of primary school.

After six years of primary education, at the age of 11, pupils are promoted automatically to the lower-secondary stage. Not all primary school leavers, however, enter the lower-secondary phase. For example, in 1976/77 the transition rate from primary school to lower-secondary school was 87.8 per cent. The four-year course is for pupils who have come through primary schools in the Chinese or Tamil medium. They spend one year in the remove class, acquiring proficiency in Bahasa Malaysia, before proceeding to form I. Promotion at the lower-secondary level is also automatic, and pupils sit for the Lower Certificate Examination

(LCE) after 3 years (or 4 years in the case of those from remove classes). The LCE was conducted in Malay (Sijil Rendah Pelajaran) and English (Lower Certificate of Education) until 1978; at present, this examination is conducted only in Malay.

On the basis of their performance in the LCE, children are promoted to form IV. On the average, 60-65 per cent qualify for promotion every year. Those who are not successful in securing a place in the upper-secondary schools may continue their education in private schools. The LCE certificate also serves as the minimum qualification for appointments in both the public and private sectors. Those pupils who are selected for upper-secondary education are divided into three groups: academic, vocational and technical. At the end of two years, the academic group will sit for the Sijil Pelajaran Malavsia (SPM) or Malaysian Certificate of Education (MCE) examination. The SPM and MCE are one and the same examination, except that the former is conducted in Malay and the latter is in English. The MCE was conducted for the last time in 1980. Those who enter the secondary technical schools also sit for the SPM examination after two years (though the subjects taken are more technically oriented). while those enrolled in the vocational schools sit for the Malaysia Vocational Certificate of Education examination.

The transition rate in 1976/77 from uppersecondary phase to post-secondary phase was 15.7 per cent. Post-secondary education is divided into arts, science and technical streams. At the end of two years, pupils sit for the Sijil Pelajaran Tinggi Malaysia (SPTM) or the Higher School Certificate examination, which serves as the basis for selection into the six local universities and for application to tertiary institutions overseas.

The formal education system, supported by public funds, bears the main responsibility for educating the country's youth. However, there are private educational institutions which compliment the work of the formal system by providing educational services from kindergarten to form VI levels. Since kindergarten is not available in the public education system, private enterprises meet this educational need. At higher levels of education, these private institutions provide an opportunity for the drop-outs from the government-assisted education system to continue their education.

¹² The conversion of English-medium primary schools into Malay-medium began in 1970 with standard I; by 1982, all the classes in the secondary school had been converted into Malaymedium. By 1983, the medium of instruction for all courses at the university level had also been converted to Malay.

Considering that only about 16 per cent of the appropriate age group secured places in government post-secondary institutions in 1977, the educational services provided by these private institutions could be considered an important contribution towards the educational development of the country.

In 1970, only 8 per cent of secondary enrolment was outside the government system, while at the primary level, the corresponding figure was negligible, being less than 1 per cent.¹³ This shows that the public educational system was meeting the demand for mass education quite satisfactorily.

D. TRENDS IN EDUCATIONAL ENROLMENT

1. Standard-type schools

The growth in enrolments at the primary level for schools of all media is shown in table 138. Total enrolment for all standard-type schools almost tripled over the period 1947-1957, from 382,847 in 1947 to 933,151 in 1957. In 1967 total enrolment rose to 1.3 million and had increased further to over 2 million by 1980.

The highest average annual rate of increase in enrolment (9.3 per cent) was recorded in the first decade (1947-1957). During the following decade the annual growth rate declined to 3.5 per cent. Since then, the annual growth of primary school enrolments has stabilized at around 2.4 per cent.

The sharp increase in primary school enrolment during the period 1947-1957 can be attributed to several factors. First, this period had a high rate of population growth. For instance, the population aged 0-14 increased from 1,945,375 in 1947 to 2,752,208 in 1957, representing an increase of 41.5 per cent. During this period there was also an increasing awareness of the importance of education, and this was reflected in the demand for places in the primary school system. The large enrolment figures also suggest that the Government was able to meet this demand for education by expanding facilities. The number of standardtype schools of all media almost doubled from 2,658 in 1947 to 4,367 in 1957; while the number of teachers increased fourfold, from 11,811 in 1947 to 44,060 in 1957. It is interesting to note that there was a sharp reduction in the number of private primary schools during this period, from 992 in 1947 to 252 in 1957. These figures suggest the wide accessibility of the government educational system in Peninsular Malaysia.

As table 138 also shows, the highest annual rate of increase for this period was for the English primary schools with 11.2 per cent, followed by the Malay schools with 10.2 per cent, the Chinese schools with 8.4 per cent, and Tamil schools with 4.1 per cent. During the decade following independence, the English schools registered an annual rate of increase of 8.3 per cent and the Malay schools 3.0 per cent. Chinese schools showed a sharp decline in growth, from 8.4 to 1.4 per cent, while Tamil schools showed a slight increase, from 4.1 to 4.6 per cent. Since 1970 there have been sharp declines in the enrolment rates of the English and Tamil schools and an increase in the enrolment of Chinese and Malay schools. These changes in the enrolments among the four language media schools are the direct results of government language policy in education. From 1970, the English schools began converting to Malay-medium from standard I. The decline in enrolment in Chinese primary schools during the period 1957-1967 was largely the result of Chinese children moving into English schools. After 1970 however, the enrolment in the Chinese primary schools shows a higher annual rate of increase. With respect to Tamil schools, enrolment since 1967 has remained consistently around 80,000 pupils. This situation can be explained in terms of the poor quality of these schools, which were considered to be the smallest and the poorest in the educational system. As such, parents who desired a better education for their children opted for other media schools, especially English and Malay schools.

2. Secondary schools

Enrolment figures for assisted and private secondary schools are shown in table 139. The table shows that enrolment at the secondary level has been growing steadily over the period 1947-1980. There has been a dramatic increase in total secondary enrolment between 1947 and 1957. Enrolment in assisted secondary schools increased

¹³ E. Lee, *Educational Planning in West Malaysia* (Kuala Lumpur, Oxford University Press, 1972).

Year/period	English-medium	Malay-medium	Chinese-medium	Tamil-medium	Total
<u> </u>		Absolute	enrolments		
1947	45 174	164 528	139 191	33 954	382 847
1957	130 360	441 567	310 458	50 766	933 151
1967	289 056	591 560	355 771	79 203	1 315 590
1970	338 799	609 226	394 166	79 278	1 421 469
1975	53 598 ^a	971 923	480 984	80 404	1 586 909
1979	_	1 068 509	502 995	77 013	1 648 517
1980	_		•••		2 008 567
		Percentage distribution	tion of enrolments		
1947	11.8	43.0	36.4	8.8	100.0
1957	14.0	47.3	33.3	5.4	100.0
1967	22.0	45.0	27.0	6.0	100.0
1970	23.8	42.8	27.7	5.6	100.0
1975	3.4	61.2	30.3	5.1	100.0
1979	-	64.8	30.5	4.7	100.0
		Absolute increase/de	crease in enrolments		
1947-1957	85 186	277 039	171 267	16812	550 304
1957-1967	158 696	149 993	45 313	28 437	382 439
1967-1970	49 743	17 666	38 395	75	105 879
1970-1975	-285 201	362 697	86 818	1 126	165 440
1975-1979	-	96 586	22 011	-3 391	61 608
	Ave	rage annual rate of incr	ease/decrease in enrolmer	nts	
1947-1957	11.2	10.2	8.4	4.1	9.3
1957-1967	8.3	3.0	1.4	4.6	3,5
1967-1970	5.4	1.0	3.8	0.03	2.6
1970-1975	-30.8	9.8	4.1	0.3	2.2
1975-1979	_	• • •	•••		3.7

Table 138. Enrolments in assisted primary schools, Peninsular Malaysia, 1947-1980

Sources: Malaysia, Educational Statistics (1967-1979) (Kuala Lumpur, Ministry of Education).

Chai Hon Chan, Education and Nation-building in Plural Societies, the West Malaysian Experience (Canberra, Australian National University, 1977).

1980 figures from Malaysia, Annual Statistical Bulletin of Malaysia (Kuala Lumpur, Department of Statistics, 1982).

^a The final year in which English was used as a medium of instruction and the last cohort of primary school pupils using English as medium of instruction, except in the study of English as a second language.

more than five times, from 15,202 to 80,602, during this period; among private secondary schools, enrolment increased from a mere 1,254 to 24,837. The factors contributing to this dramatic increase were the increasing demand for secondary education by those completing primary level education and the expansion of educational facilities at the secondary level.

Enrolments in assisted secondary schools were 714,886 and 1,065,388 in 1957 and 1980,

respectively, representing remarkable growth over the last two decades. Enrolment figures for assisted secondary schools show a sharp increase after 1965 owing to the abolition of the MSSE. Since the abolition of this examination, more pupils have been able to enter lower-secondary schools. The figures in table 139 also show a sharp increase in the enrolment in English schools since 1962. This is because the Chinese schools began to conform to the national educational system and became English schools.
Year	English-medium	Malay-medium	Chinese-medium	Total
		Assisted schools		
1947	12 5 10		2 692	15 202
1957	48 235	2 315	30 052	80 602
1960	72 499	4 9 5 3	38 828	116 280
1961	84 347	8 158	37 793	130 298
1962	119 217	13 224	_	132 441
1963	135 233	19 9 10	_	155 143
1964	151 386	28 067	·	179 453
1965	208 363	67 484	_	273 847
1966	242 7 19	97 477	_	340 196
1967	286 254	128 069	_	414 323
1968	309 664	135 496	_	445 160
1969	330 593	134 147	_	464 740
1970	339 961	128 143	_	468 104
1971	349 121	151 413	_	500 534
1972	370 289	177 941	_	548 230
1973	370 401	214 004	_	584 405
1975	420 054	294 832	_	714 886
1979			_	923 653
1980			_	1 065 388
		Private schools		
1947	726		528	1 254
1957	19 411		5 426	24 837
1960	26 303		14 124	40 427
1961	30 723		17 948	48 67 1
1962	33 275	115	34 410	67 800
1963	39 465	225	35 789	75 479
1964	45 045	314	35 507	80 866
1965	39 165		30 470	69 635
1966	33 623	394	26 141	60 1 58
1967	25 809	556	22 221	48 586
1968	24 449	853	19 507	44 791
1969	20 455	894	18 476	39 825
1970	20 170	1 050	15 890	37 110
1971	19 536	2 029	17 574	39 139
1972	18 426	1 854	18 520	38 800
1973	19 944	1 607	19 806	41 257
1975	27 613	5 315	25 047	57 973
1980				

Table 139. Enrolments in assisted and private secondary schools,
Peninsular Malaysia, 1947-1980

Source: Malaysia, Educational Statistics (1967-73) (Kuala Lumpur, Ministry of Education).

Enrolment in private secondary schools shows an interesting pattern of development. The private school system served as a parallel education system at the secondary level, providing education to up to one half as many as those enrolled in assisted secondary schools until 1964. Enrolments in private secondary schools dropped sharply after the abolition of the MSSE in 1965. The proportion of pupils attending private secondary schools compared to assisted secondary schools was 45.1 per cent in 1964; this declined to 7.9 per cent in 1970, but picked up slightly to 8.1 per cent in 1975.

Over the two decades 1947-1967, the number of assisted secondary schools increased from 18 to 706, while private secondary schools increased from 5 to 184 during the same period. There were only 166 teachers in assisted secondary schools in 1947, but this figure had increased to 16,780 by 1967. For the corresponding period, teachers in private secondary schools increased from 37 to 1,772. In 1974, there was a total of 984 assisted and private secondary schools with 25,361 teachers. At the primary level there were 4,381 primary schools, both assisted and private, with a total of 48,174 teachers.

3. Tertiary education

Large increases in enrolments at both the primary and secondary levels over the last two decades have built up the demand for tertiary education. This has been particularly significant with the increase in secondary enrolment since the democratization of secondary education in 1965. In the following discussion, tertiary education includes both post-secondary college-level education and university education. The colleges not only provide a variety of professional and subprofessional courses but also conduct preuniversity courses to prepare students for entrance to the universities.

Prior to 1969, there was only one university in the country, the University of Malaya, and there were three colleges: the Technical College, the College of Agriculture, and the Mara Institute of Technology. At present there are six universities and four colleges providing tertiary education.

The six universities are:

(a) University of Malaya;

- (b) University of Science Malaysia;
- (c) National University of Malaysia;
- (d) University of Agriculture;
- (e) University of Technology;

(f) Northern University of Malaysia (established in 1984).

The four colleges are:

- (a) Kuantan Polytechnic (1976);
- (b) Ungku Omar Polytechnic;
- (c) Tunku Abdul Rahman College;
- (d) Mara Institute of Technology.

Table 140 shows enrolment figures for the five universities in the country over the period 1970-1981. On the whole, these universities experienced a rapid increase in student enrolment. In spite of this increase, many students with the requisite qualifications had to be turned away. For example, for the 1968/69 academic session, a total of 2,000 students gained admission to the University of Malaya, while 1,200 qualified applicants had to be rejected. This represented about 38 per cent of total applicants. This situation exemplified the pressure for places in the univer-To ease this pressure, four more university. sities were established over the years 1969-1971. The University of Science (formerly known as the University of Penang) was established in 1969, the National University in 1970, the Agriculture University and the University of Technology both in 1971. With the establishment of these four universities, university enrolment more than tripled from 9,494 students in 1970 to 30,209 in 1981. The percentage increase for the four universities is steep because of their positions as new universities. As table 140 shows the University of Malaya had the lowest increase of 15.6 per cent over the period 1975-1981, while the National University recorded the highest percentage increase of 193.3 per cent for the same period. The University of Technology recorded a 114.8 per cent increase in enrolment, the second highest. The other two universities had relatively modest growth rates, because they were not new universities as such. The University of Agriculture grew from the College of Agriculture in Serdang and the University of Technology evolved from the Technical

					Per cent	increase
	1970	1975	1980	1981	1970-1975	1975-1981
Colleges						
Ungku Omar Polytechnic	493	1 136	2 449	2 714	130.4	138.9
Mara Institute of Technology	2 142	7 872	8 997	11 108	267.5	41.1
Tunku Abdul Rahman College	1 195	4 133	6 272	6 285	245,9	52.6
Universities						
University of Malaya	7 777	8 056	8 851	9 310	3.6	15.6
University of Science, Malaysia	271	2 851	3 2 2 6	4 387	952.0	53.8
National University of Malaysia	169	2 562	5 807	7 514	1 416.0	193,3
University of Technology, Malaysia	692	2 263	4 150	4 862	227.0	114.8
University of Agriculture, Malaysia	585	2 656	3 496	4 136	354.0	55.7
Total	13 324	31 529	43 248	50 316	136.6	59.6

Table 140. Enrolment increases in tertiary education, Malaysia, 1970-1980

Sources: Malaysia, Third Malaysia Plan, 1976-1980 (Kuala Lumpur, Government Printer, 1976).

Malaysia, Annual Statistical Bulletin (Kuala Lumpur, Department of Statistics, 1982).

College in Kuala Lumpur. Both offer diploma and degree courses, with the majority of students taking diploma courses. In the 1973/74 session, only 7 per cent of the total student population in the University of Agriculture were degree students, while only 1 per cent of University of Technology students were preparing for their degrees. However by 1980, the percentage of degree students in the University of Agriculture had increased to 51.5 per cent, while in the University of Technology, this was increased to 19.5 per cent.

The four colleges, which train middle-level technical, commercial, professional and subprofessional personnel to meet the manpower requirements of the country, increased their enrolments dramatically, from 3,830 students in 1970 to 16,427 in 1980. The total enrolment in these institutions is expected to increase to 24,475 in 1985.¹⁴ This is in keeping with government policy to remedy existing imbalances in enrolments between diploma and degree courses, so as to meet the sizeable demand for manpower at the sub-professional levels. The annual output from these courses in proportion to the total output of degree holders is expected to increase from 54.4 per cent in 1980 to 59.1 per cent in 1985.¹⁵ The future expansion of the tertiary education system is guided by the socio-economic objectives of the New Economic Policy and the need to meet the manpower requirements of the country.¹⁶

4. Enrolment ratio

The general enrolment ratio for Malaysia is calculated on the basis of the proportion of persons

¹⁴ Malaysia, Fourth Malaysia Plan, 1981-1985 (Kuala Lumpur, Government Printer, 1981).

¹⁵ Ibid.

¹⁶ The over-riding objectives of the New Economic Policy (NEP) are:

⁽a) the promotion of national unity through the eradication of poverty among all Malaysians; and

⁽b) the restructing of Malaysian society so that the identification of race with economic function and geographical location is reduced and eventually eliminated [Malaysia, *Third Malaysia Plan*, 1976-1980 (Kuala Lumpur, Government Printer, 1976), p.7].

aged 7-19 years currently enrolled in schools (standard I to upper form VI) per 100 persons of that age group in the population as whole.¹⁷ The crude enrolment rate is the proportion of the total population currently in school per 100 persons in the total population of the country. The 1980 census gives a crude enrolment ratio of 25.3 per cent for Malavsia as a whole; the crude enrolment ratio for males was higher, namely 27.1 per cent, than for females (23.4 per cent). The same pattern was noted for the general enrolment ratio in Peninsular Malaysia: 75.3 per cent for males, 72.5 per cent for females and 73.9 per cent for both sexes combined. For Malavsia as a whole, the general enrolment rate was 72 per cent. The general enrolment ratio for Peninsular Malaysia in 1980 was slightly higher, at 74 per cent.

Table 141 shows enrolment ratios for all levels of education, by age group for selected years. The figures in the table show that there has been great progress made by the public education system since 1957. The rate of participation at the primary level for the age group 6-11 increased from 80 to 91 per cent over the years 1957-1967. This participation rate is an impressive one considering the absolute increase in the numbers for that age group over the decade. Since 1967, the participation rate at the primary level has been maintained at above 90 per cent, except for in 1970 when it dropped to slightly below that figure. These enrolment ratios are high by Asian standards.

Table 142 shows that in 1980, more than three quarters (75.3 per cent) of all males aged 7-19 years were currently enrolled in schools, while the percentage for females was 72.5 per cent. There were also rural-urban differences in the general enrolment rate, with the urban population registering a ratio of 75 per cent, while the rural population registered only 72.5 per cent.

General enrolment ratios for the different communities show that Malays had the highest. at 75.3 per cent, while Indians had the lowest, at only 66.5 per cent. The ratio for Chinese was 73.4 per cent. A similar pattern was noted in the enrolment ratios for the sexes among the different In urban areas "other" had the communities. highest enrolment ratio of 81.2 per cent, followed by Malays (78.5 per cent) and Chinese (74.6 per cent). Again, Indians had the lowest ratio. In rural areas, the enrolment ratio for Malays was slightly higher than that for Chinese; Indians and "others" recorded lower ratios. The table also shows that the most disadvantaged group in education was rural female "other", whose general enrolment rate of 57.3 per cent was the lowest of any group.

Table 143 shows enrolment ratios for selected countries in the ESCAP region. The 1972 enrolment ratio of 44.7 per cent for Peninsular Malaysia compares favorably with those of most of the countries in the region. Malaysia's ranks as the seventh highest ratio among the 17 countries.

Year	Primary 6-1 1	Lower secondary 12-14	Upper secondary 15-16	Upper secondary 17-18	University 19-24	
1957	80.0	15.0	11.0			
1967	91.0	52.0	16.0	5.0	1.0	
1970	88.2	52 _r .2	20.1	3.1	0.6	
1977	94.0	76.6	36.8	4.5	1.4	
1980	94.5	78.2	39.3	5.2	2.1	
1983	95.0	83.6	40.4	5.6	2.8	

Table 141. Enrolment ratios by educational level and age group, PeninsularMalaysia, 1957-1983

Sources: 1957-1970: Malaysia, Educational Statistics (Kuala Lumpur, Educational Planning and Research Department, Ministry of Education, 1967-1973.

1977-1983: Malaysia, Economic Report (Kuala Lumpur, Ministry of Finance, 1982/83, 1984/85).

¹⁷ The general enrolment rate is expressed as: $(E/P_{7-19}) \ge 100$. Where E = total enrolment and P_{7-19} = Population aged 7 to 19 years.

Community group	-	Urban			Rural		Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Malay	78.5	75.8	71.1	76.2	73.2	74.7	76.7	73.8	75.3
Chinese	74.6	73.4	74.0	74.9	72.7	73.8	74.7	73.1	73.4
Indian	72.5	68.8	70.7	67.7	59.9	63.8	69.6	63.4	66.5
Other	81.2	77.7	79.5	60.8	57.3	59,1	68.8	65.4	67.1
Total	75.9	73.9	74.9	75.0	71.8	73.4	75.3	72,5	73.9

Table 142. Distribution of population 7-19 years currently in school, by community,

sex and residence, Peninsular Malaysia, 1980

(Percentage)

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. II (Kuala Lumpur, Department of Statistics, 1983).

Country	· · · · · · · · · · · · · · · · · · ·	Enrolment ra	atios (all levels) ^a	
	1950	1960	1968	1972
Afghanistan	1.9	3.2	7.8	9.7
Burma	5.4	19.1	31.7	33.2 ^b
Democratic Kampuchea	10.3	25.1	37.0	
India	15.1	24.7	32.8	34.6 ^b
Indonesia	15.9	22.3	25.8	28.0 ^c
Iran	10.9	18.4	31,5	34.9 ^d
Japan	54.1	59.4	56.5	58.1
Lao People's Democratic Republic			17.2	19.6
Malaysia (Peninsular Malaysia)	26.8	41.3	44.8	44.7 ^d
Mongolia		27.8		40.6 ^b
Nepal		4.4	11.7	10.4 ^c
Philippines	• • •	40.6	52.7	52.1 ^e
Republic of Korea	34.6	43.5	51.3	53.7
Singapore	31,2	51.2	59.1	52.2 ^e
Sri Lanka	41.6	51.6	46.5	47.8 ^b
Thailand	• • •	36.7	36.8	39.8

Table 143. Enrolment ratios for all levels of education, selectedAsian countries, 1950-1972

Source: UNESCO, Progress of Education in the Asian Region - Second Statistical Supplement (Bangkok, 1975), table 27.

^a Total enrolments at first, second and third level (as nationally defined) per 100 persons aged 5-24.

^b Refers to the year 1969.

c Refers to the year 1970.

d Refers to the year 1971.

e Refers to the year 1973.

The six countries with higher 1972 enrolment ratios were Japan, Republic of Korea, Philippines, Singapore and Sri Lanka.

E. DROP-OUT RATES

The holding power of the educational system can be assessed by analysing retention rates at the different levels of education. The rates of progression of a particular cohort through the various grade levels of an educational system, would provide the attrition rate, or the drop-out rate in that system. This educational wastage has been defined as the "incidence in a country's educational system, from the point of view of its efficiency, of factors such as premature school leaving and retardation or repetition".¹⁸

Since the introduction of automatic promotion in the primary and lower-secondary levels in 1961, the major source of educational wastage has been the premature withdrawal of youths from the educational system. Those who dropped out were mainly from the poorer groups in a community, especially in rural areas. This situation was inconsistent with the expressed goals of the Government to provide equal educational opportunity to all, and to gear the educational system to meet the manpower needs of the economy. A large proportion of these drop-outs would not have had the chance to attain even basic literacy. This represents a serious wastage of human resources, which a developing country such as Malaysia cannot afford. It also increases the educational expenditure per completed primary-school leaver two- to fourfold.19

In 1972, a study was undertaken by the Ministry of Education to examine the causes of school leaving among primary and lower-secondary pupils, with the purpose of recommending policies and plans which would improve school retention rates and enhance life chances, especially for the rural poor.²⁰ The study found that variations in enrolment ratios could be accounted for by the

socio-economic status (or poverty) of the family, subcultural values of the youths, and the characteristics the schools they attended. The study found that in 1972 among the age group 15 and above, 91 per cent of youths classified as high on both of the parental advantage and socioeconomic status scales, were enrolled in school. compared to 13 per cent of those classified as low on both of these scales. As for subcultural values, it was found that those youths who had scored low on the modernity index scale²¹ were more likely to drop out than those who scored favorably. Drop out rates were disproportionately higher for the poor within each community who attended vernacular schools, which were not as well endowed as the English schools.

Retention rates for age cohorts born in 1956 and 1960 are shown in table 144. There was very little difference in the attrition rate for these two age groups spaced four years apart. The average drop out rate through the six years of primary school was over 11 per cent, more than half of which occurred in the last two years of primary school. The table also shows that the highest drop out rate occurs at the transitional point between primary and secondary levels. About 19 per cent of youths who have been enrolled in standard VI do not enter lower-secondary school. At the end of nine years of schooling about 45 per cent had dropped out of school. Further, there were community differences in the enrolment ratio. The table shows that there was very little difference in the pattern of attendance between Chinese and Malay youths. Indian youths however, had lower rates of enrolment for both age Table 145 illustrates the different drop groups. out ratios for the communities. Chinese had a slightly higher enrolment rate than Malays, but the over-all difference at any point was no more than 3 per cent. The drop out rate for Indians in primary school was substantially higher than for the other two groups.

Drop out rates were higher in rural areas for all communities, and at all socio-economic status

(e) appreciation of innovation.

¹⁸ "The problem of educational wastage", *Bulletin*, UNESCO Regional Office for Education in Asia, March 1976 (Bangkok).

¹⁹ UNESCO, Development of Education in Asia, Third Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia, Singapore, May/June 1971, p. 70.

²⁰ Malaysia, Drop-out Report (Laporan Keciciran), (Ministry of Education and Department of Statistics, 1973).

 $^{^{21}}$ The following factors contributed to the modernity index scale:

⁽a) a favourable attitude towards science and technology,

⁽b) esteem for educational qualifications,

⁽c) interest in national and world affairs,

⁽d) tolerance for religious divergence and

	Maximum	Modal form	Age	cohort	Average	Not
Age	years of schooling	or standard	1956 (per	1960 cent)	decrement (per cent)	enrolled (per cent)
15+	10	form III or IV	45.1		11.0	54.9
14+	9	II or III	56.1		5.1	43.9
13+	8	I or II	61.2		8.4	38.8
12+	7	remove or I	69.6		19.0	30.4
11+	6	standard VI	87.5	89.6	4.2	11 .4
10+	5	v	92.7	92 <i>.</i> 9	2.8	7.2
9+	4	IV	95.3	95.9	2.3	4.4
8+	3	III	97.6	98.2	0.7	2.1
7+	2	II	99.0	98.3	1.4	1.4
6+	1	Ι	100.0	100.0		
Number	of sample cases		6 9 1 7	6 027		

Table 144. Percentage of youth enrolled at each age level in two cohorts, and percentagesleaving school since previous age level, Malaysia, 1972

Source: Malaysia, Drop-out Study (Kuala Lumpur, Ministry of Education, 1973).

			Community		
Age-group		Malay	Chinese	Indian	Total
11+	Per cent	90 4 527	89	79	89
15+	Per cent	4 327	47	39	6 027
	Number	3 690	2 670	557	6 9 17

Table 145. Enrolment ratios in secular schools by community andage group, Malaysia, 1972

Source: Malaysia, Drop-out Study (Kuala Lumpur, Ministry of Education, 1973).

levels compared with urban areas. Table 146 shows that 1972 total enrolment rates for all communities were lower in rural than in urban areas. Again, the same pattern was observed for all socioeconomic status groups. In urban areas enrolment ratios among Malays were substantially higher than those of the other two communities. In rural areas a slightly higher proportion of Chinese were enrolled compared to the other two groups.

F. LITERACY AND EDUCATIONAL ATTAINMENT

1. Literacy rates

A person is considered literate if he can, with understanding, both read and write a short simple statement connected with his everyday life. In the 1947 Malayan census, literacy was defined as the ability to read and write a simple letter either in Malay, English or any other language; in the 1957 census, literacy was considered the ability to read a notice and to write a letter. In the 1970 and 1980 censuses the respondent was regarded as literate if he or she could read a newspaper or a letter, and to write a letter in any of the four major languages (Malay, English, Chinese or Tamil) or in any other language. The 1957, 1970 and 1980 census questions regarding literacy were asked only of persons aged 10 years and over.

In 1970, of the total population aged 10 years and above in Malaysia, 60.8 per cent were considered literate, 4.5 per cent semi-literate²² and 37.5 per cent illiterate. Peninsular Malaysia showed a higher rate of literacy than the country as a whole. The corresponding figures were 60.8 per cent literate, 4.8 per cent semi-literate and 34.4 per cent illiterate in 1970; and 75.3 per cent literate, 3.4 per cent semi-literate and 21.3 per cent illiterate in 1980. For Peninsular Malaysia, literacy rates improved by about 15 per cent, from 60.8 to 75.3 per cent during the period 1970-1980, as shown in table 147. The 1980 literacy rate for males (83.5 per cent) was higher than that for females (67.3 per cent). However, the progress made by females over the period 1970-1980 is impressive.

In 1970, of the total population of 6,053,759 aged 10 years and above, 60.8 per cent were literate, while in 1980, of the population of 7,977,088, 75.3 per cent were regarded as literate. This represents an increase of 31.8 per cent in population over the 10-year period, and an increase of 63.2 per cent in the literate population over the same period. Thus, the literacy rate has grown faster than the population for the intercensal period. The improvement in literacy rates reflects

Socio-economic			Urb	an		Rural				
advantage	(combined scales)	Malay	Chinese	Indian	Total	Malay	Chinese	Indian	Total	
High	Per cent	88	59	77	67	67	53	54	63	
•	Number*	245	562	46	854	409	163	26	598	
Mediur	n Per cent	54	39	47	43	28	30	28	28	
	Number*	206	547	56	809	917	269	85	1 27 1	
Low	Per cent	27	22	21	22	14	18	16	15	
	Number*	51	185	38	274	450	112	124	686	
Total	Per cent	65	42	42	47	28	31	22	28	
	Number*	503	1 294	140	1 937	1 776	544	235	2 555	

Table 146. Youth aged 15 and over who have not completed form III currently enrolled by
urbanization, socio-economic status and community, Malaysia, 1972

Source: Malaysia, Drop-out Study (Kuala Lumpur, Ministry of Education, 1973).

* Number of youths age 15 and over in the survey who have not completed form III.

²² This classification referred to persons who could read but could not write as defined in both the 1970 and 1980 censuses.

T * 4	, , , , , ,	1970			1980				
Literacy in any language	Male	Female	Total	Male	Female	Total			
Literate	72.1	49.6	60.8	83.5	67.3	75.3			
Semi-literate	5.0	4.5	4.8	3.3	3.5	3.4			
Illiterate	22.9	45.9	34.4	13.2	27.2	21.3			
Total									
Per cent	100.0	100.0	100.0	100.0	100.0	100.0			
Number	3 022 659	3 031 100	6 053 759	3 935 552	4 041 536	7 977 088			

Table 147. Distribution of population 10 years and over by literacy in any language and sex, Peninsular Malaysia, 1970 and 1980

(Percentage)

Sources: R. Chander, General Report - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics,

the greater accessibility of educational facilities in the post-independence period. It further reflects the expanded educational facilities now available in the country.^{2 3}

There were also differences in the literacy rates between rural and urban areas. Among the urban population, the level of literacy was higher,

²³ R. Chander, General Report – 1970 Population and Housing Census (Kuala Lumpur, Department of Statistics, 1977), vol. I, p. 323. being 68.2 per cent, compared with 57.6 per cent for the rural population. These differences had slightly improved by 1980, with urban literacy at 81.6 per cent and rural at 71.3 per cent. The pattern of differences between the sexes among the urban and rural populations in Peninsular Malaysia can be seen in table 148.

Table 149 shows the percentage of the population literate in various languages, by community group for the period 1970-1980. There

Literacy in any			Urban			Rural							
language		Male	Female	Total	Male	Female	Total						
Literate	1970	78.4	57.9	68.2	69.3	46.0	57.6						
	1980	88.5	74.9	81.6	80.3	62.6	71.3						
Semi-literate	1970	6.6	6.2	6.4	4.3	3.7	4.0						
	1980	3.0	3.5	3.3	3.5	3.5	3.5						
Illiterate	1970	15.0	35.9	25.4	26.4	50.3	38.4						
	1980	8.5	21.6	15.1	16.2	13,9	25.2						
Total													
Per cent		100.0	100.0	100.0	100.0	100.0	100.0						
Number	1970	920 580	919 963	1 840 543	2 102 079	2 111 137	4 213 216						
	1980	1 519 900	1 548 000	3 068 000	2 415 600	2 493 500	4 909 200						

Table 148. Distribution of Population 10 years and over by literacy in any language,
sex and residence, Peninsular Malaysia, 1970 and 1980

(Percentage)

Sources: R. Chander, General Report - 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977).

Koo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics,

1983).

Table 149. Literate population 10 years and over by language and community, Peninsular Malaysia, 1970 and 1980 (Percentage)

Literacy by language	Malay		Chinese		Indian		Other		Total	
······	1970	1980	1970	1980	1970	1980	1970	1980	1970	1980
Malay	61.8	76.3	14.0	30.5	22.3	44.8	24.2	38.6	39.9	57.2
English	10.8	14.4	21.8	27.2	30.0	36,2	52.6	47.7	17.2	21.2
Any language	62.1	76.6	58.1	65.4	63.5	64.9	67.2	62.5	60.8	66.8

Sources: R. Chander, General Report – 1970 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics, 1977). Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia (Kuala Lumpur, Department of Statistics,

1983).

was a significant increase over this decade in the percentage of the population aged 10 years and above literate in Malay. Literacy in Malay rose by 17.3 percentage points, while the level of literacy in English increased by only 4 percentage points.

By community group, Malays showed a substantial improvement in literacy levels during the intercensal period. Their literacy rate improved from 62.1 per cent in 1970 to 76.6 per cent in 1980. This is an improvement of 14.5 per cent, compared to 7.3 per cent for Indians: It is more common to compute literacy rates for the age group 15 years and above rather than for the group 10 years and above. Table-1-50 presents this information for Malaysia as well as for several countries of the ESCAP region. When the literacy of the population aged 15 years and above is taken as the yardstick, the position of Malaysia is less impressive than when the literacy of the population aged 10 years and above is chosen. The comparative data shown in table 150 indicate that Malaysia could make further progress in the promotion of literacy.

Table 15	0. Literate	population	15	years and ov	ver	several	Asian	countries,	various	years
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Country		Percentage literate		
Country	Year	Total	Male	Female
Afghanistan	1965 ^a	6.4	12.0	1.0
Bangladesh	1974 ^b	25.8	37.3	13.2
Burma	1962 ^a	59.7	80.0	40.0
India	1971 ^a	33.4	46.8	18.9
Indonesia	1971 ^a	56.6	69.5	44.6
Iran	1966 ^a	22.8	32.9	12.3
Japan	1960 ^a	97.8	99.0	96.7
Lao People's Democratic Republic	1962 ^a	28.3	30.0	27.0
Malaysia	1962 ^a	52.8	59.0	48.0
Nepal	1975 ^a	19.2	33.4	5.0
Pakistan	1961 ^a	15.4	23.5	5.8
Philippines	1970 ^a	82.6	84.3	80.9
Republic of Korea	1970 ^a	94.3	98.0	90.7
Singapore	1970 ^a	68.9	83.0	54.3
Sri Lanka	1971 ^a	77.6	86.0	68.5
Thailand	1970 ^a	87.7	93.7	81.9

Sources: ^a UNESCO, "Disparities in levels of illiteracy and educational attainment in countries of the Asian region", table 5.

^b UNESCO, Statistical Yearbook, 1978/79 (Publishing Division, United Nations, 1980), table 1.3.

2. School attendance

Table 151 shows the percentage distribution of the population by school attendance, for urban and rural community groups in 1970 and 1980. In Peninsular Malaysia, in 1970, 36.7 per cent had completed their education, 22.7 per cent were still in school and 40.6 per cent had never attended school. The corresponding figures for the year 1980 were 42.3, 24.9 and 32.8 per cent. On a whole, the urban population had a higher school attendance rate than the rural. In 1980, only 27.5 per cent of those in urban areas had never attended school, compared to 35.9 per cent in rural areas.

3. Educational attainment

In both the 1980 and 1970 censuses, information pertaining to educational attainment, in terms of the highest level of schooling completed, was obtained for all persons who where either currently attending or who had completed school. This information thus reflects past and present provision of educational services. Persons who were still at school at the time of the census were classified according to their current level of education; it was assumed that they would complete that level by the end of the year. Persons who left school without completing a full year at a given level were classified at the next lower level.

Table 152 shows that by 1980 not only had the population of Malaysia become more educated, but also a greater proportion of the population had attained primary and lower-secondary education and moved on to the upper-secondary level. Of the total population aged 5 and over, 4,556,979 persons (or 81 per cent) had some formal education; this includes those who had some primary education and those who actually completed primary education. Moreover, there were no large disparities between the sexes among younger generations attaining any given educational level, a marked contrast with the situation that prevailed among older generations.

		Ma	lay	Chi	ıese	Ind	ian	Oth	er	Το	tal
		Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Never attended school	1970	32.5	45.2	32.5	40.7	31.2	43.7	21.0	55.7	32.2	43.9
Never attended school	1980	28.0	36.6	27.7	33.7	21.1	35 <i>.</i> 9	19.6	53.7	27.5	35,9
Currently attending	1970	27.5	21.8	24.6	22.4	24.1	19.4	23.1	14.2	25.3	21.7
school	1980	25.9	25.7	23.2	25.8	23.1	21.9	21.6	17 <i>9</i>	24.2	25.3
Completed school	1970	40.0	33.0	42.9	36.9	44.7	36.9	55.9	30.1	42.4	34.4
Completed school	1980	46.2	37.7	49.1	40.4	50.8	42.1	58.8	28.4	48.3	38.7
Total		100.0	100.0	100.0	100.0	100.0	100.0	100,0	100.0	100,0	100.0
					1	fotal urba	n and rura	ป			
Never attended school	1970	43	.3	36	.8	39	9.4	41	.6	40	.6
INEVER attended sentoor	1980	34	.4	30	.3	3	1.9	39	.0	32	.8
Attending school	1970	22	.7	23	5	2	1.0	17	.8	22	.7
Attending school	1980	25	.7	24	.3	22	2.4	19	5	24	.9
Completed school	1970	34	.0	39	.7	39	9.6	40	.6	36	.7
Completed school	1980	39	.9	45	.3	4	5.7	41	5	42	.3
Total		100	.0	100	0.0	100	0.0	100	.0	100	0.0

Table 151. School attendance by community groups in rural and urban areas,
Peninsular Malaysia, 1970 and 1980
(Percentage)

Sources: Same as for table 148.

Table 152. Distribution of the population 5 years and above by educational attainmentfor age groups and sexes, Malaysia, 1980

(Percentage)	
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		Educational attainment					
Age group and sex	Number (thousands)	No schooling	Primary	Lower secondary	Upper seconday and above		
Male							
5-9	910.4	38	62				
10 - 14	829.9	4	57	39			
15 - 19	731.0	5	19	40	36		
20 - 29	1 106.2	8	35	26	31		
30 - 39	774.2	13	52	16	19		
40 - 49	546.2	25	57	8	10		
50 - 59	362.2	37	54	4	5		
60 +	365.7	56	38	3	3		
5 +	5 625.9	19	46	20	15		
Female							
5 - 9	870.8	39	61				
10 - 14	800.6	5	58	37			
15 - 19	753.6	8	24	36.	32		
20 - 29	1 192.0	15	42	19	24		
30 - 39	760.7	32	49	9	10		
40 - 49	544.3	58	35	4	3		
50 - 59	368.8	75	21	2	1		
60 +	376.1	90	9	1	1		
5 +	5 666.9	32	42	16	11		
Person							
5-9	1 781.1	38	62				
10 - 14	1 630.5	4	58	38			
15 - 19	1 484.6	7	21	38	34		
20 - 29	2 298.2	11	39	23	27		
30 - 39	1 534.9	22	51	12	15		
40 - 49	1 090.6	42	46	6	7		
50 - 59	731.0	56	37	3	3		
60 +	741.9	73	23	2	2		
5 +	11 292.8	25	44	18	13		

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

A substantial proportion of persons aged 15 and over (7 per cent) did not complete the minimum education level provided, that is the primary level. Table 152 also shows that only 34 per cent of persons aged 15-19 continued to the upper-secondary level. A substantial proportion of those who attained a level below the lower secondary either dropped out or were not promoted to the next grade.

Table 153 shows the extent to which the level of educational attainment has improved in the different geographic areas within Malaysia. Between 1970 and 1980 there were sharp

				Educatio	nal attainment	
State and region		Number (thousands)	No schooling	Primary	Lower secondary	Upper secondary and above
Johore	1970 1980	1 064.7 1 354.4	28 22	56 48	11 18	6 12
Kedah	1970	804.5	35	52	9	4
	1980	934.8	27	47	16	10
Kelantan	1970 1980	573.9 727.2	46 36	42 37	8 15	4 12
Malacca	1970 1980	341.4 387.0	27 21	56 46	12 19	6 14
Nagri Sambilan	1970	404.6	25	56	13	6
Negri Semonan	1980	476.1	20	48	19	14
Pahang	1970 1980	418.0 646 <i>.</i> 5	31 22	54 50	10 17	5 11
Penang	1970	668.3	25	53	13	9
I citalig	1980	794.9	19	45	20	16
Perak	1970 1980	1 317.1 1 503.8	27	56 49	11 18	6 11
Perlis	1970	104.3	32	54	10	4
	1980	127.2	25	46	17	12
Selangor	1970 1980	820.8 1 234.9	27 19	54 44	11 19	8 18
Trengganu	1970	337.5	43	46	7	4
	1980	439.6	31	42	15	12
Federal Territory	1970 1980	555.8 802.1	19 14	50 39	16 22	14 25
Peninsular Malaysia	1970	7 411.0	30	53	11	6
	1980	9 428.3	22	45	10	14
Sabah	1970 1980	534.4 799.9	50 41	38 35	8 16	4 8
Sarawak	1970	737.7	52	37	7	4
	1980	1 064.4	39	39	14	8
Malaysia	1970 1980	8 682 <i>.</i> 9 11 292.8	33 25	51 44	11 18	6 13

Table 153. Distribution of the population aged 5 and over by educational attainment,
state and region, Malaysia, 1970 and 1980

(Percentage)

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

reductions in the proportions who had never received education or who had only reached primary level in every state. In addition there were large increases in the proportions who had received lower and upper-secondary education.

While the population in each state became more educated over the decade, there were still significant differences in levels of educational attainment among states. Within Peninsular Malaysia, as might be expected, the less developed states on the east coast had higher proportions without education than the more developed states on the west coast. For example, in 1980, 36 per cent of persons aged 5 and over in Kelantan had no education, compared to only 14 per cent in the Federal Territory. Much higher proportions of persons with upper-secondary levels of education and above were found in the more developed states such as Federal Territory, Selangor, Penang and Malacca; the lowest proportions were seen in Kedah, Pahang and Perak. However, the levels of educational attainment in these latter three states were still above those for Sabah and Sarawak.

G. EDUCATIONAL EXPENDITURE

Table 154 gives the public development expenditure for education and training programmes for the period 1971-1980, covering the Second Malaysia Plan (SMP) and the Third Malaysia Plan (TMP). A point to be noted about the difference between the SMP allocation and estimated expenditure is that the rank order of the various subsectors was maintained. With respect to the TMP allocation, the percentages devoted to vocational and technical education and to higher technical education seem surprisingly low.

Table 155 shows expenditure on education as a percentage of GNP for several countries of the ESCAP region for the years 1965, 1970, and the latest year for which information is available. Malaysia ranks very high among these countries.

H. PROSPECTS

1. Trends and plans

It is evident from the discussion thus far, that Peninsular Malaysia has a fairly well-developed educational system catering to the population aged 7-19 years. In 1970, the enrolment ratio for this group was 67 per cent; it had increased to 74 per cent by 1980. The literacy rate for the population aged 10 years and above was 75.3 per cent in 1980. These figures illustrate the impressive progress made by the educational system in the last two decades. The democratization of primary and lower-secondary education has made it possible for every child to have nine years of uninterrupted formal schooling if he or she so desires. Although education is not compulsory, near universal primary education has been achieved and enrolment rates at the secondary level have been rising steadily over the years.

Educational expenditure has also kept pace with increases in enrolment. In 1978, the total budgetary allocation for the Ministry of Education was \$M 1,726 million. This was almost a fourfold increase over the 1968 allocation of \$M404 million. The 1978 figure represented 22 per cent of total expenditures and was the largest amount allocated to any single ministry. This figure has been increased even further in later years. As can be seen from table 156, by 1983 the total allocation for the Ministry of Education stood at \$M 2,915 million, or 16 per cent of total GNP. Educational expenditure per capita for Malaysia increased from \$M 42.4 in 1964 to \$M 196.9 in 1983. This figure is expected to grow to \$M 240 by 1985. These figures show clearly the priority accorded to education by the Government.

Although every child is given equal access to education for nine years, inequalities in educational opportunity still remain. The Drop-out Report has pointed out that the attrition rate among the poor, especially the rural poor, was highest. There were also inequalities in educational provisions between rural and urban areas, between vernacular and secular schools and between the different states in the country. There are still small and poor schools in the educational system. These schools are most likely to have a single teacher and multiple classes. The quality of education imparted in these schools leaves much to be desired. The pressure of the increasing numbers in the school-going ages has also created problems, such as increasing class size, double sessions in many schools (especially in the urban areas, resulting in a 10 per cent reduction in school hours) and the recruitment of untrained teachers who were provided crashed training only during week-ends

Programme	Revised SMP ^a	Percentage	Estimated	Percentage	TMP ^b	Percentage
- To Branning	1971-1975	subsector	1971-1975	subsector	1976-1980	subsector
Primary education	87.4	16.0	80.2	16.6	210.0	19.6
Secondary education	133.2	24.2	138.0	28.6	200.7	18.8
Vocational and technical education	34.0	6.2	25.7	5.3	20.7	1.9
Higher technical education	7.7	1.4	6.6	1.4	22.7	2.1
Teacher education	235.4	43.1	198.5	41.1	468.6	43.9
University education	9.0	1.7	3.6	0.7	77.2	7.2
Other programmes	35.7	7.1	30.6	6.3	68.2	- 6.4
Total	545.4	99.7	483.6	100.0	1 068.1	99 . 9

Table 154. Public development expenditure for education and training programmes,
Peninsular Malaysia, 1971-1980

(\$M million)

Source: Data based on or calculated from information given in Malaysia, Third Malaysia Plan, 1976-1980 (Kuala Lumpur, Government Printer, 1976), table 22.9.

- ^a Second Malaysia Plan.
- ^b Third Malaysia Plan.

and holidays. In the effort to provide adequate coverage, the quality of education had not received the attention it deserved until recently.

The emphasis of education and training under the Fourth Malaysia Plan (1981-1985) includes strategies to remedy the identified weaknesses and to improve the whole system. This is in order to increase further its efficiency as an instrument in meeting the manpower requirements of the New Economic Policy. The educational objectives under the Fourth Malaysia Plan (FMP) are:

(a) to strengthen the educational system to promote national integration and unity through:

- (i) Implementing, progressively, Bahasa Malaysia as the main medium of instruction at all levels, by the end of the 1980s;
- (ii) Continuing Islamic religious education as compulsory for Muslim students at the primary and secondary levels. Non-Muslims students will be taught moral education and ethics during the period when Muslim students, and those who choose to do so, are attending classes in

Islamic teachings. The main objective of religious and moral education and ethics is to build a strong basis for developing a disciplined society with high moral values;

- (iii) Narrowing the gap in educational opportunities between the rich and the poor, and among the various regions and races in the country, through a more equitable distribution of resources and facilities;
- (iv) The eventual integration of the educational system in Sabah and Sarawak into the national system;

(b) the orientation and expansion of the education and training system towards meeting national manpower needs, especially in science and technology;

(c) the improvement of the quality of education in order to reduce wastage and increase its effectiveness for nation building;

(d) the expansion of the research, planning and implementation capacity of the Education Ministry to meet the above objectives.

Country	Year	Public expenditure on education as percentage of GNP	Country	Year	Public expenditure on education as percentage of GNP
Afghanistan	1966	1.0	Pakistan	1965	1.8
0	1970	1.2		1970	1.7
	1974	1.3		1975	2.3
Bangladesh	1965	1.3	Papua New Guinea	1965	4.9
	1969	1.2	<u>r</u>	1970	4.8
	1975	1.4		1975	6.6
Burma	1965	2.7	Philippipes	1065	26
	1970	3.1	rimppmes	1905	2.0
	1971	3.4		1970	1.6
India	1965	2.5	Der blie GW and	10(5	1.0
	1970	2.8	Republic of Kolea	1965	1.8
	1975	2.8		1970	3.7
Indonesia	1970	2.8		1973	3.2
	1975	3.3	Singapore	1966	4.2
Iran	1965	3.2		1970	3.1
11411	1970	2.9		1975	2.9
	1974	3.1	Sri Lanka	1965	4.5
Lao People's Demo-	1965	2.4		1970	4.3
cratic Republic	1970	2.5		1975	3.1
FF	1972	2.9	Thailand	1965	26
Malavsia	1965	4.7	Thanung	1970	3.5
1.242-49	1970	4.8		1975	36
	1975	5.8	<u></u>		
Nepal	1965	0.6	Sources LINESCO	Davelonment	of Education in Aris and
•	1970	0.6	Oceania: Statistical Tr	pevelopment ends and Pro	of European in Asla and ections 1965-1985 (Paris
	1975	1.5	UNESCO, 1978), table 2	8.	,

Table 155. Public expenditure on education as a percentage of GNPfor Asian and Pacific countries, 1965-1975

 Table 156. Federal government allocation for education, Malaysia, 1968-1985

 ·	Operatio	onal expenditure	Developmental expenditure		
Year	\$M million	Share in total govt. expenditure (per cent)	\$M million	Share in total govt. developmental expenditure (per cent)	
1968	404	3.2	53	8.6	
1970	477	8.7	44	6.1	
1975	1 158	23.0	212	10.0	
1978	1 791	22.0	252	7.0.	
1980	2 228	16.0	∘ 558	7.0	
1982	2 991	18.0	1 082	8.0	
1984 ^a	2 915	17.0	997	11.0	
1985 ^b	3 772	18.0	971	14.0	

Source: Malaysia, Economic Report (Kuala Lumpur, Ministry of Finance, various years).

^a Latest estimates.

^b Budget appropriations.

The policy under the FMP is to maintain nine-year schooling for every child, and to improve existing educational facilities at all levels of education. For the country as a whole, enrolment at the primary level is expected to increase from 2.0 million in 1980 to 2.2 million in 1985.

A new curriculum is being formulated for the primary level and this will establish a firm educational foundation, especially in reading, writing and arithmetic. The new curriculum will be divided into two phases; the first phase for standards I to III and the second for standards IV to VI. For the first phase, the curriculum will devote 75 per cent of the time on the acquisition of reading, writing and arithmetic, and the remaining 25 per cent on other educational activities. In the second phase, basic skills will still be the thrust of the curriculum, but other subjects will also be This new curriculum was planned, introduced. developed and tried out in 1981 and 1982. Phased implementation began in 1983 with standard I.

Enrolment at the lower-secondary level in government and government-aided schools is estimated to increase from 809,663 in 1980 to 955,149 in 1985, while that in the upper secondary is expected to rise from 230,924 to 383,339. The increase in enrolment at the upper-secondary level will be significant, as it will be the recipient of the first implementation of the policy to extend the existing nine-year universal schooling to 11 years. This will entail an increase in the number of classrooms, not only to cater to the increase in enrolment at the lower- and upper-secondary levels, but also to reduce the class size at the secondary levels, from the existing 42 students per class to 33 per class by 1985.

Steps will also be taken to change the present system of streaming into arts, science, technical and vocational at the upper-secondary level. This will be replaced with streaming into general and vocational education, in line with the recommendations of the Cabinet Committee. To achieve this objective, more vocational schools must be built. In 1980, pupils in vocational schools formed 4.6 per cent of total enrolment at the uppersecondary level. This will be increased to 6.3 per cent by 1985. An added feature of vocational education will be the introduction of one-year specialized courses for those possessing the Malaysian Certificate of Vocational Education. The courses will be designed to train students to attain the level of skill required by industry. Courses will be in various trades such as tooland-dye making, foundry practice, welding, refrigeration and air conditioning, and architectural and structural drafting. Short-term courses of oneyear duration will also be conducted for those with the Sijil Rendah Pelajaran (Malay LCE). These courses, in various trades such as general mechanical fitting, tiling and flooring, bricklaying and plastering, plumbing and welding, will provide basic skills to enable the trainees to be gainfully employed.

To improve the quality of teachers at the primary and lower-secondary levels, the training period has been extended from two to three years beginning with the intake of trainee teachers in 1981. Expansion of the existing physical facilities and the construction of two new teacher training colleges will be undertaken during the Plan period. The teacher-student ratio will be revised so as to improve the teaching and learning process. It is estimated that 21,330 teachers will be trained during the Plan period. In-service teacher training programmes will continue to play a significant role, in an over-all effort to improve and upgrade the performance of teachers and the quality of education. Towards this end, the four Education Resource Centers under construction in Alor Star, Kota Bharu, Kuala Trengganu and Kuantan will be able to provide valuable support for the in-service training of teachers.

Programmes to increase the supply of graduating teachers at the diploma and degree levels will be continued. During the Plan period, it is estimated that a total of 5,900 teachers will graduate from the five universities.

The Plan emphasizes that continuing efforts will be made to upgrade the quality of teaching through intensive in-service courses in Bahasa Malaysia, English, Mathematics, Science and in technical and vocational subjects. Through these in-service courses teachers are expected to be exposed current educational thinking, particularly changes in educational curricula and innovations.

The Plan also recognizes the importance of remedial and compensatory educational measures to equalize educational opportunities between communities, geographical areas, and between different school systems. Pre-school education, amalgamation of small schools into larger units, textbook loan schemes, health and nutritional programmes, and improvement of hostel, library and other educational facilities are some of the compensatory measures envisaged under the Plan.

The Educational Planning and Research Division and the Higher Education Division of the Ministry of Education will be strengthened during this period to improve further the research and planning capabilities of these divisions.

The Curriculum Development Center is expected to be involved directly in the quality control of education through development and improvement of the curricula in Science, Mathematics, Bahasa Malaysia and English. Another institution which is expected to improve the quality of education is the Education Resource Center. These Centers also collate and disseminate information and materials on various aspects of educational development.²⁴

These efforts to improve the coverage and the quality of education under the Plan could be facilitated if there were reductions in the fertility level of the population. Lower fertility rates could release funds which would have otherwise been expended on static expansion, i.e. on the ever-growing numbers of children of school-going age, while the enrolment ratio remains unchanged. These funds could then be used to improve the quality of education and to increase its coverage. The savings resulting from declining fertility rates could also be used for activities related to socio-economic development. Social services could also be improved, and this could help to increase the productivity of the educational system. It has been estimated that for a developing country with 2.5 per cent growth in population per annum, the increase in the population is likely to consume between 30 and 50 per cent of the total increase in educational expenditures within a decade.²⁵

The educational progress achieved by the country will also affect fertility levels. Education, by contributing to the process of socio-economic development, sets the stage for rapid declines in fertility levels. Education brings about social change; it affects the attitudes, tastes and the style of life and diffuses knowledge about new ideas and goods. It also tends to reduce the traditional value placed on the large-family norm.²⁶

2. Educational implications and projected population, 1970-1990

Let us now consider the educational implications of the projected population for Peninsular Malaysia between 1970 and 1990. Various projections of the total population for all communities are given in table 157. These projections assume that mortality rates will remain constant between 1970 and 1990, and that there will be no external migration. The projections made under these assumptions show that the population may increase from 9.1 million in 1970 to 16.2 million by 1990, under the high projection (A), while under the low projection (D), it may increase to only 14.1 million.

The projected number of children reaching 6 years of age, the projected primary and secondary school enrolment and number of teachers required for Peninsular Malaysia for the period 1975-1990, are shown in tables 158-162. The various projections indicate the need for expanding the educational services for the growing population of school-going age. If projection A is correct, there will be about 4.1 million children reaching age 6 over the period 1985-1990. If there is a 30 per cent decline in the fertility rate, then there will only be 2.6 million children of school-going age.

The different projections show different rates of enrolment. If the high projection (A) is followed, then primary-school enrolment is expected to increase by 70.6 per cent, but if the low projection (D) is followed then the increase is only 24 per cent from 1970 to 1990. If it is further assumed that there will be an increase of one half percentage point in enrolment rates per year, then the increase is more than 80 per cent for projection A, and 30 per cent for projection D.

The projected figures for secondary enrolment show that those who will enter the secondary level in 1980 have already been born, and that the

²⁴ Malaysia, Fourth Malaysia Plan, 1976-1980.

²⁵ G. Jones, op. cit., p. 181.

²⁶ A.D. Williams "Determinants of fertility in developing countries, review and evaluation of the literature", in Michael C. Keelay, ed., *Population*, *Public Policy and Economic Development* (New York, Praeger Publishers, 1976).

Projection	1970	1975	1980	1985	1990
Α	9 181 674	10 385 612	11 945 909	13 838 963	16 239 350
В	9 181 674	10 343 394	11 830 309	13 589 573	15 779 770
С	9 181 674	10 316 828	11 715 976	13 215 830	15 001 475
D	9 181 674	10 159 455	11 361 903	12 645 741	14 116 498

Table 157. Projected total population for all communities, PeninsularMalaysia, 1970-1990

Source: D.Z. Fernandez, A.H. Hawley and S. Pridaza, The Population of Malaysia, Research Paper No. 10, (Kuala Lumpur, Department of Statistics, 1976).

Note: These projections have been made under four assumptions:

Projection A : fertility constant, 1970-1990; Projection B : fertility decline, 10 per cent, 1970-1990; Projection C : fertility decline, 20 per cent, 1970-1990; Projection D : fertility decline, 30 per cent 1970-1990.

Table 158. Projected number of children reaching 6 years of age in
quinquennial intervals, Peninsular Malaysia, 1975-1990

Projection ^a	1975-1980	1980-1985	1985-1990
Α	2 985 634	3 583 016	4 190 427
В	2 883 445	3 352 863	3 766 575
С	2 674 383	2 954 066	3 134 767
D	2 410 029	2 589 748	2 600 775

Source: Same as for table 157.

^a See note to table 157.

Table 159. Projected primary school enrolment, Peninsular Malaysia, 1975-1990

Projection ^a	1975	1980	1985	1990
	Based on	1970 ratio of enrolment to pop	oulation 6-12 years	
Α	1 508 799	1 649 798	1 954 767	2 438 144
В	1 507 436	1 627 523	1 885 476	2 216 504
С	1 494 124	1 584 112	1 814 791	2 070 094
D	1 504 792	1 470 487	1 603 796	1 774 146
	Assuming on	e half percentage point increase	in enrolment per year	
Α	1 551 468	1 743 112	2 120 613	2 7 13 9 5 2
В	1 550 068	1 7 19 577	2 045 443	2 467 239
С	1 536 379	1 673 711	1 968 761	2 304 267
D	1 547 348	1 553 659	1 739 865	1 974 842

Source: Same as for table 157.

^a See note to table 157.

Projection ^a	1980	1985	1990
	Based on 1970 ratio of enrolm	ent to population 12-18 years	
Α	643 064	657 190	712 565
В	643 064	650 874	723 612
С	643 064	646 887	702 142
D	643 064	623 215	622 292
	Assuming one percentage point	increase in enrolment per year	
Α	809 230	911 915	1 080 816
В	809 230	903 150	1 097 571
С	809 230	897 618	1 065 006
D	809 230	864 771	943 891

Table 160. Projected secondary school enrolment, Peninsular Malaysia, 1970-1990

Source: Same as for table 157.

^a See note to table 157.

Table 161. Projection of primary school teachers required, PeninsularMalaysia, 1970-1990

Projection ^a	1970	1975	1980	1985	1990
<u> </u>	Assumi	ng constant ratio of enro	olment to population 6-	12 years	
Α	45 736	48 281	52 794	62 552	78 021
В	45 736	48 238	52 081	60 335	70 928
С	45 736	47 812	50 692	58 073	66 243
D	45 736	48 153	47 056	51 321	55 442
	Assuming	g one half percentage po	int increase in enrolmen	t per year	
Α	45 736	49 647	55 780	67 860	86 846
В	45 736	49 602	55 026	65 454	78 952
С	45 736	49 164	53 559	63 000	73 736
D	45 736	49 515	49 7 1 7	55 675	63 195

Source: Same as for table 157.

^a See note to table 157.

Projection ^a	1970	1975 1980		1985	1990
	Based	on 1970 ratio of enrolm	nent to population 12-18	3 years	
Α	19 775	23 168	24 886	25 433	27 576
В	19 775	23 168	24 886	25 189	28 004
С	19 775	23 168	24 886	25 034	27 173
D	19 775	23 168	24 886	24 118	24 083
	As	suming one per cent inc	rease in enrolment per y	ear	
Α	19 775	26 161	31 317	35 291	41 828
В	19 775	26 161	31 317	34 954	42 476
С	19775	26 161	31 317	34 7 38	41 216
D	19775	26 161	31 317	33 467	36 528

Table 162. Projected requirement of secondary school teachers, PeninsularMalaysia, 1970-1990

Source: Same as for table 157.

^a See note to table 157.

projected figures apply only after 1980. The increase in secondary enrolment for 1980-1990 is 39.5 per cent for projection A and 22 per cent for projection D. These enrolment rates are relatively low compared with the primary enrolment rates. If however, a one-per cent annual increase in secondary enrolment rates is assumed, then enrolment rates would increase by 85 per cent under projection D and 112 per cent under projection A.

As for teacher requirements, the number of primary school teachers is expected to increase from 45,736 in 1970 to 70,021 in 1990. This estimate under projection A is based on the 1970 teacher-pupil ratio of 3.2 to 100 being held constant. The estimated increase under projection D, based on a one half-per cent annual increase in enrolment, is shown in table 160.

The increase for secondary school teachers is estimated on the basis of the 1970 teacher-pupil ratio of 3.87 to 100 taken as constant over the period 1970-1990 (see table 161). This gives a figure of 27,576 for 1990, an increase of 39 per cent under projection A; or 24,083, an increase of 22 per cent under projection D.

During this period government expenditure for social services is expected to increase at the rate of 6.68 per cent per annum, which was the average rate of increase of expenditure over the years 1965-1970. In 1990, the expenditure for social services is expected to increase fivefold based on 1970 figures. Considering that the expenditure for education tops the list among all social services expenditures, it can be assured that education will demand a significant proportion of the increased expenditure for social services.

Given the commitment of the Malaysian Government to equalize educational opportunities for all children in the country, a decline in the rate of population growth would certainly help. Although fertility rates have been declining since 1958, the youthful composition of the population and the heritage of high growth rates of the past, may well hinder progress towards the attainment of such a transition by the end of this century. However, there are other factors such as modernization, urbanization, higher educational attainment, the impact of family planning programmes and changes in values and ways of which may accelerate the process of demographic transition in Malaysia. The resultant savings from declining fertility rates could then be utilized for qualitative and quantitative improvement in the educational system of the country.

XII. SOCIO-CULTURAL ASPECTS OF POPULATION GROWTH*

INTRODUCTION

The rate of population growth in Malaysia has been high throughout history. This is attested to by the statistics on population growth since 1911, when the first census was taken, up to 1980, when the latest one was carried out. During this period, the rate of growth has always been 2-3 per cent, as shown in table 163. This qualifies Malaysia as an area with high fertility.¹

The high rate of population increase is discernible in all the three major ethnic groups, namely Malay, Chinese and Indian, as can be seen in table 164.

From the late nineteenth century up to the First World War, immigration, particularly of the Chinese and Indians, was the major factor that caused the rapid increase in the population of Malaysia. It was the policy of the colonial Government to import labour from China and India to

* Contributed by Rokiah Talib and Mohamed Fauzi, both of University of Malaya.

¹ The dividing line between high and low fertility areas can be drawn "at a crude birth rate of 30 per 1,000 population and a gross reproduction rate of 2.0". See United Nations, "Conditions and trends of fertility in the world" in Charles B. Nam, ed., *Population* and Society (Boston, Houton Miflin Co., 1968). work in tin mines and on rubber estates in the country. After the Second World War, and especially after independence in 1957, the increase was due to high birth and low mortality rates, a

Table 163. Rate of population growth, PeninsularMalaysia, 1911-1985

Year	Rate of growth
1911-1921	2.4
1921-1931	3.0
1931-1947	1.8
1947-1957	2.5
1957-1960	2.8
1960-1970	2.6
1970-1980	2.3
1981-1985	2.4 ^a

Sources: Lim Chong Yah, Manjit Singh and Asmah Ahmad, Sifat Geografi Penduduk, (Kuala Lumpur, University of Malaya Press, 1977).

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

Malaysia, Mid-Term Review of the Fourth Malaysia Plan 1981-1985 (Kuala Lumpur, Government Printer, 1984).

a Estimated.

	(Terceniage)									
Group	1911-1921	1921-1931	1931-1947	1947-1957	1957-1970	1970-1980	1981-1985 ^a			
Malay	1.5	1.9	1.9	2.9	3.1	2.7	2.4			
Chinese	2.4	5.0	2.9	2.4	2.3	1.5	2.7			
Indian	8.4	3.0	-0.04	3.3	2.3	1.5	2.0			
Total	2.4	3.0	1.9	2.8	2.6	2.2	2.4			

Table 164. Growth by main ethnic group, Peninsular Malaysia, 1911-1985

Sources: Lim Chong Yah, Economic Development of Modern Malaya (Kuala Lumpur, Oxford University Press, 1969), p. 182.

Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1983).

Malaysia, Mid-Term Review of the Socond Malaysia Plan 1981-1985 (Kuala Lumpur, Government Printer, 1984).

¹ Estimated.

consequence of improved health facilities. In the extensive literature on trends in the growth pattern of populations, it is this demographic aspect of growth that has been stressed and given prominence.² The socio-cultural aspect of growth has been mentioned only in passing, if at all.

It is therefore the aim of this chapter to draw some attention to this aspect of population growth. The special focus shall be on sociocultural factors that affect marriage and childbearing since, as it can be safely assumed, the increase in the population of this country is through births within marriage. Childbirth outside of marriage is negligible, since there is a widespread social and religious stigma attached to childbearing out of wedlock.

The writers feel that the level of reproduction in Malaysia is, to a certain extent, controlled by the socio-cultural norms on family size and related matters such as marriage and abortion. The social and cultural values affecting marriage and family size that predominate in the three major communities in Malaysia are here considered together. Instead of giving separate treatment to each of these communities or socio-cultural elements, the following discussion will be general in nature. Such an approach is deemed necessary for the following considerations. Although there are arguments for socio-cultural differences among the three ethnic groups, they have been equally subjected to similar forces of change. In fact, it is

Kernal Singh Sandhu, Indians in Malaya: Some Aspect of Their Migration and Settlement 1886-1957 (Cambridge, The University Press, 1969). interesting to note certain trends of social and cultural convergence among the three ethnic groups.

It is thus impossible to discuss the factors affecting one group separately, as they have a tendency to overlap and influence one another. The case of education is a salient example. Modern education has diverse effects on many aspects of life which have had similar impacts on all of the community groups. A particularly important effect of education is to give women the chance to pursue roles outside of the traditional domestic sphere.

A. SOCIO-CULTURAL NORMS RELATING TO MARRIAGE AND FAMILY SIZE

It is a plausible proposition that age at marriage affects the reproduction rate of any given population. Early marriage lengthens the productivity age of a couple and results in more children, sometimes more than the desired number.

Table 165 shows marital status of the Malaysian population 10 years and above. The table indicates that in 1980 48 per cent of the population were married, 47 per cent were not yet married and 6 per cent were married earlier but became single because of widowhood, divorce or separation.

The 1980 census found that marital status did not differ significantly by race. Married Malays constituted about 48 per cent of their total population, Indians, 46 per cent and Chinese, about 47 per cent. This can be seen in table 166.

	N	umber (thousands)	Per cent of total				
Maritai status	Total	Male	Female	Total	Male	Female	
Never married	3 710.5	1 995.0	1 715.5	46.5	50.7	42.5	
Currently married	3 788.8	1 853.6	1 935.1	47.5	47.1	47.9	
Widowed	386.2	66.1	820.1	4.8	1.7	7.9	
Divorced or separated	91.5	20.8	70.7	1.2	0.5	1.7	
Total	7 977.1	3 935.6	4 041.5	100.0	100.0	100.0	

Table 165. Marital status of persons aged 10 years and above by sex, Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia vol. II (Kuala Lumpur, Department of Statistics, 1983).

² See, for example J.A. Jackson, ed., *Migration* (London, Cambridge University Press, 1969); and

		Per cent of total								
Marital status	All communities	Malay	Chinese	Indian	Other	All communities	Malay	Chinese	Indian	Other
Never married	3 710.5	1 994.1	1 306.3	390.2	19.9	46.5	45.5	47.8	48.1	39.2
Currently married	3 788.8	2 118.1	1 270.1	373.1	27.5	47.5	48.3	46.5	46.0	54.2
Widowed	386.3	200.9	141.3	41.6	2.5	4,8	4.6	5.2	5.1	4.9
Divorced or separated	91.5	70.6	14.2	5.8	0.9	1.2	1.6	0.5	0.8	1.7
Total	7 977.1	4 383.7	2 732.0	810.7	50.7	100.0	100.0	100.0	100.0	100.0

Table 166. Marital status of persons 10 years of age and above by community, Malaysia, 1980

Source: Same as for table 165.

It is very difficult to ascertain at what age an average Malaysian marries, as there are no nation-wide data available. The Statistics Department has however, compiled data relating to marital status of the population aged 10 years and over for a number of states in Malaysia. Figures for one of these States, Johore, are presented for purposes of example in table 167.

From this table it can be seen that most marriages take place among those in the age groups 20-29. There is evidence to indicate that females marry at earlier ages than do males. This can be seen especially in marriages that take place within the age range 15-29.

This is consistent with the findings of Djamour concerning the marrying age of Malays in Singapore. In investigations carried out in the early 1960s, Djamour found that most Malay females in Singapore married when they were 16-19 years of age. As for males, most married at 19-23 years.³ This, however is not the case presently. Owing to better prospects and career opportunities, the young of today tend to marry at a much later age compared to their counterparts in the 1960s.

There are also some incidences of very early marriages, though such marriages are not popular. It may be interesting to note that at the time of enumeration, less than 1 per cent (100 out of 206,200) of the 10-14 age group was married. This also showed that early marriages are not so popular now. There have also been cases of early divoree among this age group. Table 167 shows that 30 out of 206,200 were either divorced, widowed or permanently separated. In terms of percentage however, this amounted to only 0.01 per cent.

Although early marriages are now becoming rarer, they were more wide-spread in days past among all communities in the country. This was especially true for women. More often than not, women were married upon reaching puberty. Among Malays there was at one time a stigma attached to the unmarried woman. A woman well past puberty and still unmarried was a cause for worry and anxiety to her parents.

There were also similar pressures for men to opt for early marriages, though to a much lesser degree. An unmarried son became a cause for concern only when he approached middle age. Still, especially among Malays, a man was never considered an adult unless he was married.

Though such values are slowly being eroded, for reasons to be elucidated later, there is still fairly high incidence of early marriage, particularly in rural areas (see tables 168 and 169). Early marriage can be seen as one of the factors that has accelerated the rate of population growth in the past.

Another institution which is directly related to childbearing is divorce and with it, the rules and mores regulating remarriage. In Malaysia, different religions uphold equally diverse values pertaining to divorce and remarriage. However, the Koran states that divorce should be allowed only when all efforts for reconciliation have failed, while Muslim law condones both divorce and

³ J. Djamour, *Malay Kinship and Marriage in Singapore* (London, Anthlone Press, 1965).

Table 167. Population 10 years and over by current marital status and sex, Johore, 1980 (Thousands)

	1	Never married		Currently married		Widowed		Divorced/permanently separated			Total				
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
10-14	104.8	101.3	206.0	0.04	0.1	0.1	0.01	0.02	0.02	0.01	0.01	0.01	104.8	101.4	206.2
15-19	90.5	88.0	178.5	0.5	6.2	6.7	0.01	0.04	0.05	0.01	0.04	0.04	91.1	94.3	185.3
20-24	57.1	42.7	99.8	10.8	33.7	44.5	0.06	0.3	0.3	0.04	0.3	0.3	68.0	76.8	144.8
25-29	25.4	14.2	39.6	33.5	48.6	82.1	0.2	0.5	0.7	0.1	0.4	0.5	59.2	63.7	122.8
30-34	8.6	5.3	13.8	43.4	45.8	89.2	0.2	0.9	1.1	0.1	0.5	0.6	52.3	52.5	104.8
35-39	3.0	1.8	4.8	35.2	33.1	68.4	0.3	1.1	1.4	0.1	0.5	0.6	38.6	36.6	75.2
40-44	1.8	1.1	2.9	34.9	32.0	66.9	0.4	2.4	2.8	0.2	0.7	0.8	37.3	36.1	73.4
45-49	1.0	0.7	1.7	24.4	23.4	47.8	0.5	3.3	3.8	0.2	0.6	0.8	26.0	28.0	54.0
50-54	0.8	0.4	1.2	22.1	18.2	40.3	0.7	5.0	5.6	0.2	0.6	0.8	23.8	24.1	47.9
55-59	0.5	0.2	0.7	15.8	11.6	27.4	0.8	5.3	6.1	0.2	0.6	0.7	17.2	17.6	34.8
60-64	0.4	0.2	0.6	12.5	7.7	20.2	1.1	6.6	7.7	0.2	0.6	0.8	14.2	15.1	29.4
65+	1.2	0.4	1.6	22.8	8.7	31.5	5.0	1.8	23.3	0.6	1.5	2.1	29.6	28.9	58.6
Total	295.0	256.1	551.2	255.9	269.1	525.0	9.2	43.7	52.9	1.9	6.2	8.1	56.2	575.1	1 137.2

Source: Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Johore (Kuala Lumpur, Department of Statistics, 1984).

Note: Some figures do not add to the indicated sums, owing to rounding.

Age group	M	Never married		Currently married		Widowed			Divorced/permanently separated			Total			
<u> </u>	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
10-14	73.2	70.9	144.0	0.03	0.08	0.1	0.01	0.01	0.02	0.01	0.01	0.01	73.2	71.0	144.2
15-19	58.0	56.2	114.2	0.4	4.6	5.0	0.01	0.02	0.03	0.01	0.03	0.03	58.4	60.8	119.3
20-24	33.3	23.0	56.3	0.7	22.1	29.6	0.04	0.2	0.2	0.03	0.2	0.2	40.8	45.4	8.6
25-29	13.8	7.1	21.0	20.7	29.7	50.3	0.1	0.3	0.4	0.07	0.3	0.3	34.7	37.4	7.2
30-34	4.6	2.5	7.1	25.9	27.6	53.4	0.1	0.6	0.8	0.09	0.3	0.4	30.7	31.0	61.7
35-39	1.7	0.9	2.6	21.5	21.1	42.6	0.2	0.7	0.9	0.09	0.3	0.4	23.5	23.0	46.5
40-44	1.0	0.5	1.5	22.6	21.3	43.9	0.3	1.7	2.0	0.1	0.5	0.6	24.0	23.9	48.0
45-49	0.6	0.3	0.9	15.9	15.7	31.7	0.3	2.3	2.6	0.1	0.4	0.5	17.0	18.7	35.7
50-54	0.5	0.2	0.7	15.0	12.2	27.2	0.5	3.3	3.8	0.2	0.4	0.6	16.1	16.1	32.3
55-59	0.3	0.1	0.4	10.8	7.8	18.6	0.6	3.6	4.2	0.1	0.4	0.5	11.8	11.9	23.7
60-64	0.3	0.1	0.4	8.6	5.1	13.6	0.8	4.5	5.2	0.1	0.5	0.6	9.7	10.1	19.8
65+	0.7	0.2	0.9	15.9	5.6	21.4	3.3	11.8	15.1	0.4	1.1	1.5	20.4	18.6	39.0
Total	188.0	162.0	350.0	164.7	172.6	337.3	6.3	29.0	35.3	1.4	4.3	5.7	360.4	367.9	728.3

Table 168. Urban population 10 years and over by current marital status, age group and sex, Johore, 1980
(Thousands)

Source: Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Johore, 1980 (Kuala Lumpur, Department of Statistics, 1984).

Note: Some figures do not add to the indicated sum, owing to rounding.

Table 169. Rural population aged 10 years and over by current marital status, age group, sex and locality, Johore, 1980(Thousands)

	N	Nèver married	1	Cur	rently marr	ied		Widowed		Divo	rced/permane separated	ently		Total	
Age group	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
10-14	31.6	30.4	62. 0	0.01	0.02	0.03	0.01	0.01	0.01	_	0.01	0.01	31.6	30.4	62 .0
15-19	32.5	31.8	64.3	0.1	1.6	1.8	0.01	0.02	0.02	0.01	0.02	0.02	32.6	33.4	66.1
20-24	23.8	19.7	43.5	3.4	11.5	14.9	0.02	0.07	0.08	0.01	0.09	0.1	27.2	31.4	58.6
25-29	11.6	7.0	18.6	12.8	18.9	31.8	0.05	0.2	0.2	0.03	0.1	0.2	24.4	26.3	50.7
30-34	4.0	2.8	6.8	17.5	18.2	35.8	0.08	0.3	0.3	0.05	0.2	0.2	21.6	21.5	43.1
35-39	1.3	1.0	2.2	13.6	12.1	25.8	0.08	0.4	0.5	0.04	0.2	0.2	15.0	13.6	28.7
40-44	0.8	0.6	1.4	12.4	10.7	23.1	0.1	0.7	0.8	0.04	0.2	0.2	13.3	12.2	25.5
45-49	0.4	0.3	0.7	8.4	7.8	16.2	0.1	1.0	1.1	0.05	0.2	0.2	9.0	9.3	18.3
50-54	0.3	0.2	0.5	7.1	6.0	13.1	0.2	1.7	1 .9	0.05	0.2	0.2	7.7	8.0	15.6
55-59	0.2	0.08	0.3	5.0	3.8	8.8	0.2	1.7	1.9	0.04	0.1	0.2	5.4	5.7	11.1
60-64	0.2	0.09	0.3	3.9	2.6	6.6	0.3	2.1	2.5	0.06	0.2	0.2	4.5	5.0	9.6
65+	0.5	0.2	0.7	6.9	3.1	10.1	1.7	6.6	8.2	0.2	0.4	0.5	9.2	10.3	19.6
Total	107.1	94.1	201.2	91.2	96.5	187.7	2.9	14.7	17.6	0.5	1.8	2.4	201.7	207.1	408.9

Source: Khoo Teik Huat, Population and Housing Census of Malaysia 1980, State Population Report Johore, 1980 (Kuala Lumpur, Department of Statistics, 1981).

Note: Some figures do not add to indicated sum, owing to rounding.

re-marriage. In practice however, this clause in Muslim marriage law has often been abused by irresponsible husbands in order to divorce their wives. Syariah (Muslim) courts in every state of Malaysia contain voluminous records of divorces among Muslim couples. However, there seem to have been steady declines in divorce among Malays in recent years. One strong factor influencing this trend is the stricter regulations observed by the shariah courts throughout the country pertaining to divorce. This was deemed necessary by the courts since divorces among Muslim couples were so numerous.

Another factor that can influence the rate of population growth in a society is its general populace's ideas and norms concerning family size. If a society values large families, then the rate of population growth in that society will be high. It is therefore necessary to look into what the Malaysians of various ethnic backgrounds consider to be the ideal family size.

As yet, there has been no survey of opinions on this matter on a nation-wide basis, but findings of some micro studies do point to the fact that Malaysians prefer large families. In a study of 110 households in Pasir Panjang, Sekinchan, Selangor in 1975, it was found that the average number of children per family was 6. Some 14 per cent (15 out of 110) were found to have 10 or more children.⁴ In another study of 186 families in Kota Bharu, it was found that the average number of children per family was $4.7.^5$

Whether the prevalence of large families is a manifestation of societal values or otherwise is extremely difficult to determine. Deductions can however be made with some measure of accuracy.

Children are not only desired and loved but also provide a degree of security for marriage and old age.⁶ As noted by Djamour, children are "a source of joy and delight when small and a security to their parents when they grow older".⁷ So both the psychological and economic advantages of children prompt couples to have them. In traditional agricultural economies, large numbers of children were required to work on agricultural land. In such a situation, childlessness was considered a tragedy. Such a view towards childlessness persists among Singapore Malays of the 1960s; as noted by Djamour, "a childless couple is the object of much pity, the woman inevitably sighing with sorrow as she says that she gave birth to no children ..."⁸

At a time when mortality rates, especially for infants were high, the fear of losing children may have prompted parents to keep adding new members to the family. The thought that they might not have enough to provide for those children came later or not at all. This lack of worry about the future is reflected in the Malay proverb "ulat dalam batu pun ada rezekinya", which means, "even the worms in the rocks have their share of the earth's bounty".

Though fear of losing children may not reflect large family norms, it certainly may accelerate population growth over time. The fact that infant and toddler mortality rates in Malaysia in the past were high is undeniable. However, statistics (table 170) indicate a decline in death

Table 170. Crude birth rate, crude death rate and rate of natural increase, Malaysia, 1955-1982

Year	Crude birth rate	Crude death rate	Rate of natural increase
1955	44.0	11.7	32.3
196 0	38.9	9.1	29.8
1965	36.1	7.6	28.5
197 0	32.7	6.8	25.9
1975	30.3	6.2	24.0
1 98 0	30.3	5.5	24.7
1982	30.6	5.2	25.3

Sources: Malaysia, Vital Statistics Peninsular Malaysia 1979 (Kuala Lumpur, Department of Statistics, 1981).

Malaysia, Vital Statistics Peninsular Malaysia 1982, (Kuala Lumpur, Department of Statistics, 1984).

Datin Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982).

⁴ Shamsuddin Mat Jaya, "Pemlikan dan Pender jaan Tanah di Kampung Pansir Panjang" (Unpublished graduation exercise for B.A. Anthropology and Sociology, University of Malaya, Kuala Lumpur, 1975).

⁵ Mohd. Fauzi Hj. Yaacob, "Peniaga-peniaga dan Perniagaanperniagaan Melayu di Kota Baru, Kelantan" (Unpublished Ph. D. Dissertation, University of Malaya, Kuala Lumpur, 1978).

⁶ Children may contribute to the security of marriage, as couples generally consider the welfare of their children before contemplating divorce or separation.

⁷ J. Djamour, op. cit.

⁸ Ibid.

rates for as late as 1970 onwards. Such a decline in death rates owing to better medical facilities, may have contributed to smaller family size, and this has an effect on slowing down the rapid population growth experienced earlier.

The preference of parents for children of one sex over the other may be another cause for a couple to have more than the optimal number of children. Such a preference is very much related to the cultural values and institutions of the society.

Among Chinese, for example, there is an expressed desire to favour sons over daughters. Typical of a patrilineal system of kinship, the traditional Chinese family considers a female infant to be not only a dependent but also a waste because she will later marry and leave the family. She would then belong to her husband's family.

Sons are preferred for a number of reasons, mainly because they help to perpetuate the family name. A wife who does not bear her husband at least one son can be considered unfilial: according to Mencius' teaching, "there are three things which are unfilial, and to have no posterity is the greatest of them".⁹

As for the preference for sons over daughters, Chinese proverb has it that "one son is no son, two sons are undependable sons and only three sons can be counted as real sons". However as Freedman has pointed out, the preference of boys over girls is more predominant among lower income groups, especially in rural areas where agriculture is the main source of income.¹⁰ In such a case, it is clear that economic pressure has a bearing on social values. Sons have traditionally been considered sources of heavy labour to till the land.

This appears to be true among Indians as well. The traditional wish of an Indian bride has always been "to be the mother of eight sons". This stress on begetting sons is not only for the expressed purpose of continuing the family line, but is also encouraged by the dowry system practised by Indians. Malays generally do not have an expressed preference for sons over daughters or vice versa; they regard children as godsent and welcome either a boy or a girl. Still, special note should be made of a small group of Malays, viz. the Minangkabaus, mainly residents of Negri Sembilan. They require every family to have at least one daughter who shall propagate the family line and inherit the ancestral land and house. This is a special requirement of a matrilineal system of social organization.

Another factor that led to large families in the past was the lack of knowledge of methods of birth control. Modern ideas of planned parenthood were completely unknown. No doubt some traditional methods, e.g., herbal medicines, coitus interruptus etc., were practised, but these were less effective than modern methods.

It can thus be concluded that some of the possible explanations as to why Malaysian families came to be large may be found in economic, as well as psychological and normative factors.

B. RELIGIOUS VALUES AND POPULATION GROWTH

The various ethnic groups in Malaysia practise different religions: Malays are exclusively Muslims; Indians are largely Hindus, with a fair proportion of them professing either Buddhism, Catholicism, Protestantism or Islam. Chinese practise a variety of faiths. "The majority believe in the Chinese system of supernatural beliefs which is in fact a combination of Confucianism, Taoism, Buddhism and ancestor worship; some Chinese are Protestants, while others belong to Catholicism. There is also a small minority of Muslims".¹¹ This eclecticism has led many an author to conclude that the "Chinese are most tolerant in matters of religion".¹²

The Muslim religion does not specifically prohibit birth limitation, but it does contain many teachings that are conducive to fertility growth. For example, both men and women of marriageable

⁹ "The works of Mencius", James Leqq, trans., in *The* Four Books (Hong Kong, Chinese Book Co., no date), chap. 26, p. 725.

¹⁰ M. Freedman, Chinese Lineage and Society: Fukien and Kwangtung, LSE Monographs on Social Anthropology (London, Anthlone Press, 1971).

¹¹ Ting Chew Peh "Some problems of Chinese assimilation in Peninsular Malaysia", in H.M. Daham, ed., *The Nascent Malaysian Society*, Anthropology and Sociology Department (Kuala Lumpur, Universiti Kebanapaan Malaysia, 1976).

¹² V. Purcell, *The Chinese in Malaya* (Kuala Lumpur, Oxford University Press, 1967).

age are encouraged to marry and multiply. Children are regarded as among the richest blessings that God bestows, and it is taught that God will provide for the souls that He permits to come into the world. Such injunctions are very similar to the cultural values of Malays. Hence it can be said that here Islamic religious values reinforce the cultural values.

Other elements in Islamic teaching that can be conducive to population growth include the prohibition of abortion, legalization of polygyny, the lack of value placed in celibacy and the encouragement given to the widowed and the divorced fowards early remarriage.

With the exception of Catholicism, the doctrines of which concerning family planning and birth control are well known, the other religions professed by Chinese do not contain doctrines on birth limitation or increase. In the teachings of Buddhism, for example, procreation and family life are matters of secondary interest, and "... pronatalist influences in Buddhist cultures appear to stem mainly from folk mores".¹³

Hinduism, the religion of the majority of Indians in Malaysia, however has a strong pronatalist orientation. "The custom of early marriage and the high incidence of marriage among Hindus . . . have received support from the stress laid on the begetting of a son to continue the family line".¹⁴

From the foregoing, it can be concluded that large-family norms find support from the religions professed by a section of the Malaysian population, namely Islam, Catholicism and Hinduism. Other religions professed by different sections, for example Confucianism amongst the Chinese, are ambivalent on such questions. The large families to be found within the Chinese community can thus be viewed as the result of other institutional pressures, for example the desire for sons to continue the family line.

C. GOVERNMENT EFFORTS TO CURB RAPID POPULATION GROWTH

Concerned by rapid population growth, the Malaysian Government has made a conscious

effort to control it. It is the expressed government objective that the annual rate of population growth be stabilized. In 1983, the population of Malaysia was estimated at 14.8 million, and this is projected to increase to 15.5 million by 1985 at an annual growth of 2.5 per cent. The Government hopes to achieve this target by various means, one of which is to make available the services provided by the National Family Planning Board to as many as possible.

The idea of planned parenthood was first introduced informally in the 1950s in a number of states, by both doctors and nurses. In 1953, the first state Family Planning Association was introduced in Selangor, and in the following year the second was opened in Johore, followed by Associations in Perak and Malacca. In 1958, the Malayan Federation of Family Planning Associations was formed, with its headquarters in Kuala Lumpur. The National Family Planning Board (NFPB) was formally launched in 1966. In 1984, the name of NFPB was changed to the National Population and Family Development Board.

Since its earliest inception, the idea of planned parenthood and small families has been well received by certain segments of the Malaysian population. Two main patterns have emerged. First, this idea has been more readily accepted by those in urban than those in rural areas. Since this rural-urban division runs along ethnic lines (the bulk of the urban population being mainly Chinese and Indian and the rural being mainly Malay, it can be said that the majority of the recipients of planned parenthood concepts have been Chinese. One parallel factor in this case is no doubt religion, since rural Malays are largely Muslims.

Secondly, such an idea is more readily accepted by the educated than the less educated. This is again associated with urban life, which provides greater access to educational opportunities as well as exposure to modern influences. Again, urban-rural differentials imply a bias against Malays.

There is thus a paradox: planned parenthood is accepted and practised by those who can afford to have large families, namely educated and economically better-off urban residents. In a study of the Malay administrative class living in

¹³ United Nations, The Determinants and Consequences of Population Trends (New York, 1973), vol. 1.

¹⁴ Ibid.

Kuala Lumpur, it was found that the average number of children of those surveyed was 2.7,¹⁵ whereas the farmers in the Muda area had an average number of 5.1.¹⁶

It was more however, than just the lack of knowledge and unwillingness to change that prevented rural Malays from practising planned parenthood. Since many rural Malays are strongly religious, they are quite hesitant to accept modern ideas of birth control.

Although the work of the NFPB has shown some results, there are various other forces simultaneously at work that have led to falling levels of fertility. Primary among these has been the advent of modern education, which brought with it a chain of other effects.

One of the effects of modern education is a change in the values concerning women's role in society. When modern secular education was first introduced in the country, it was mainly to urban centres. Soon after independence however, it was made available to all, rural as well as urban, though the latter continue to enjoy better facilities. More importantly, education was made available to both males and females. Although there is a tendency for girls to drop out of school at earlier ages than do boys,¹⁷ many of those who manage to complete their education enter into paid employment. Since women with careers are no longer dependent upon their families, the general attitude towards female children within family has changed perceptibly. The idea that daughters are a liability to the family has been seriously eroded. With adequate education, a prerequisite to jobs and good salaries, daughters are now considered as assets to the family. Their families need not keep adding new members just to acquire sons.

With the growing emanicipation of women, early marriages for women have become less frequent. Women who have careers in mind tend to spend longer periods in school. Women with careers are more independent economically and can better afford to defer marriage, formerly the main source of security for women. Though it is debatable whether later marriages can result in lower fertility, it can be safely assumed that this is the case with women with careers, who in most cases find it difficult to combine childbearing andrearing with employment. They regard frequent maternity leave as not conducive to promoting their career.

Furthermore, the current practice of having 2-4 children, notwithstanding their sex, is catching The major argument in support of this on. tendency is that the parent-child relationship should be of high quality. This sort of argument is finding support because of rising costs of living, child-rearing and education. Greatly improved facilities. health as indicated above. have significantly reduced mortality and thereby minimized the fear of losing children.

These developments therefore, either singly or in combination, have caused changes in attitudes concerning marriage and family size. Of marriage in particular, it can be said that there is a move towards emphasizing its aspects of personal relationship rather than its reproductive aspect.

D. CONCLUSION

It may thus be concluded that in the past, much of the rapid growth of population in Malaysia was attributable to socio-cultural factors. The norm then was to marry young and have many children. Children were desirable for a number of reasons: to work for the family, to carry on the family line. Over time however. these values have changed, and the idea of planned parenthood and small families has become slowly more acceptable and wide spread. If the present trend continues, the targetted population growth rate of 2.5 per cent per annum set by the Government will be within sight. If that is achieved, the problem of having to make large capital outlays on education and on employment-creating programmes can be minimized greatly.

¹⁵ Nordin Selat, *Kelas Menengah Pentadbir Malayu* (Kuala Lumpur, Utusan Melayu Sdn. Bhd., 1976).

¹⁶ Selvadurai, *Padi Farming in West Malaysia* (Kuala Lumpur, Ministry of Agriculture and Fisheries, Government Printer, 1972).

¹⁷ Malaysia, Educational Statistics of Malaysia, 1971 (Kuala Lumpur, Dewan Bahasa and Pustaka, 1973).

XIII. NUTRITION, FOOD NEEDS AND FOOD SUPPLY IN RELATION TO POPULATION GROWTH*

INTRODUCTION

In recent years, few problems have received greater attention from agriculturists, nutritionists, and demographers than the subject of population growth and food supply. Concern over the race between human numbers and the food supply however, is not new. As far back as 1789, Thomas Malthus, the English economist and clergyman warned of impending famine if population growth was not curbed.

A vast collection of literature has now been written on the subject. Two well-known scientific journals, viz., *Science* and *Scientific American*, have devoted special issues to this topic.¹ Two world conferences, one on population held in Bucharest in 1974 and the other on food held in Rome in 1974, have also greatly heightened the awareness of the urgency of population pressure on world food supply. In Malaysia, the Agricultural University held an international conference known as Food and Agriculture Malaysia 2000, which provided a forum for discussions of food production and supplies.

Against this varied background of information, this chapter attempts to assess food production, availability and future supplies in relation to nutrition and population growth in Peninsular Malaysia.

A. POPULATION GROWTH

In 1973, world population was estimated at 3.8-4.0 billion, with a rate of increase of 2 per cent per annum. The rate of increase was highest in Africa and Latin America, both at 2.9 per cent, followed by Asia, 2.2 per cent, and the developed countries, 1 per cent. At an average growth rate of 2 per cent per annum, it is estimated that 3.7

human beings are born every second, 318,575 per day, 2.2 million per week and 114.4 million per year. By the year 2000, world population is expected to number 6.5-7.0 billion.²

Although the present-day population of Peninsular Malaysia is small by comparison with that of the world, the effects of over-population on food supply, natural resources, economic and social development and the quality of life apply equally.

In 1980, the population of Peninsular Malaysia was 11.4 million. The 1985 population is estimated at 12.9 million. Depending on choices related to fertility, the population for Peninsular Malaysia in 1990 could be any where from about 14.6 to 16.5 million.³

Malaysia's current rate of growth of 2.5 per cent is high among countries in Asia. Such a rate of population growth, if sustained, will lead to adverse effects on national development plans. Recognizing the problems posed by such rapid population growth, the Government adopted family planning as a national policy in 1964 and established a National Family Planning Board in 1966. Family planning has since then made considerable headway in urban areas, although its coverage in the rural areas has lagged somewhat. The main reasons for this have been both a lack of

Malaysia, Population Projections in Single Years, Malaysia 1970-1990 (Kuala Lumpur, Department of Statistics, 1975).

^{*} Contributed by Y.H. Chong, Institute for Medical Research.

¹ Science, vol. 188 (1975), pp. 530-650; and Scientific American, vol. 235 (1976), pp. 31-218.

² S.F. Hartley, *Population – Quantity vs Quality* (New Jersey, Prentice-Hall, 1972);

S. Bourue, ed., The Man-Food Equation (Academic Press, 1975);

R.D. Narain, "Population and food supply", in S. Bourue, ed., op. cit.; and

A.N. Duckham, G.W. Jones and E.H. Roberts, eds., Food Production and Consumption (Amsterdam, North Holland Publishing, 1976).

³ D.Z. Fernandez, A.H. Hawley and S. Pridaza, *The Population of Malaysia*, Research Paper No. 10 (Kuala Lumpur, Department of Statistics, 1976); and

personnel and of political and cultured sensitivity on the subject of family planning. Obviously, family planning programmes must be extended and improved if the rate of growth is to be reduced to below 2 per cent. Such hopes have been raised by the recent extension of family planning services to rural areas through the country's network of rural health centres.

Family planning will play a vital role in ensuring that economic and agricultural advances are not negated by rising numbers. It is apparent that any plans for the improvement of food production and nutrition in the country will have to take into account these trends.

B. CURRENT FOOD AND NUTRITION SITUATION

1. Recent trends in food production and supply

In Peninsular Malaysia, cultivated land area amounted to approximately 3.6 million hectares in 1979. The distribution of this area by main food and cash crops is illustrated in table 171. Rice, the main staple, occupies only 16 per cent of the cultivated area compared to 48 and 23 per cent for rubber and oil palm, respectively. Statistics for paddy production, acreage under paddy, yield per hectare and paddy production on a per-capita basis are shown in table 172.

Table	171.	Land utilization, Peninsular
		Malaysia, 1977-1979
		(Thousands of hectares)

Сгор	1977	1978	1979
Rubber	1 702.8	1 698.7	1 703.2
Wet paddy	345.3	335.3	331.5
Off-season paddy	212.5	103.2	223.3
Dry paddy	9.5	7.3	7.4
Coconut	243.4	245.8	246.0
Oil palm	712.0	287.9	834.8
Other	217.7	216.6	212.8
Total	3 443.2	2 894.8	3 5 5 9.0

Source: Malaysia, Statistical Handbook, Agriculture 1981 (Kuala Lumpur, Ministry of Agriculture, December 1981).

It may be estimated from these statistics that between 1972 and 1981, land area under paddy decreased by 17 per cent. This was however accompanied by an increase in paddy production per hectare of 13 per cent, so that total production during that period fell by only 6 per cent.

Local rice production however does not entirely satisfy demand and there is a constant need for imported rice. Rice imports between 1977 and 1981 are given in table 173, which also

Year	Mid-year population	Area (thousands of hectares)	Production (metric tons)	Average yield (kg/hectare)	Annual production (kg per capita)
1970	9 146 681	552.6	1 521 395	2 753	166
1972	9 624 214	591.9	1 700 005	2 872	177
1974	10 152 808	595.5	1 689 120	2 836	166
1976	10 614 469	567.2	1 604 018	2 828	151
1978	11 133 732	445.9	1 228 832	2 756	110
1980	11 422 086	530.1	1 760 771	3 322	154
1982	12 039 195	493.1	1 595 463	3 236	133

 Table 172. Paddy production, Peninsular Malaysia, 1970-1982

Sources: Malaysia, Vital Statistics Peninsular Malaysia 1979 (Kuala Lumpur, Department of Statistics, 1981).

Malaysia, Monthly Statistical Bulletin Peninsular Malaysia, June 1982 (Kuala Lumpur, Department of Statistics, 1982). Malaysia, Monthly Statistical Bulletin Peninsular Malaysia, February 1984 (Kuala Lumpur, Department of Statistics, 1984). Malaysia, Vital Statistics Peninsular Malaysia 1982 (Kuala Lumpur, Department of Statistics, 1984).

Year	Imports (thou	Production asands of metric t	Supply o n s)	Supply (Kg per capita)
1970	263.4	896.7	1 160.1	129
1972	97.4	990.5	1 087.9	115
1974	204.5	1 156.0	1 360.5	136
1976	114.4	1 118.0	1 232.4	117
1978	296.5	798.7	1 095.2	98
1980	72.8	1 145.2	1 218.0	107
1982	244.7	•••		

Table 173. Rice supply, production and imports, Peninsular Malaysia, 1970-1982

Sources: Malaysia, Agriculture in Peninsular Malaysia (Kuala Lumpur, Ministry of Agriculture, December 1976).
 Malaysia, Monthly Statistical Bulletin Peninsular Malaysia June 1982 (Kuala Lumpur, Department of Statistics, 1982).
 Malaysia, Monthly Statistical Bulletin Peninsular Malaysia February 1984 (Kuala Lumpur, Department of Statistics, 1984).

gives the total rice supply (production plus imports) and the annual per-capita supply. From this table it may be calculated that the average annual supply of rice per capita was around 108 kilograms per year for the period 1977-1981.

Fish is the major source of animal protein in Peninsular Malaysia. Annual marine fish landings 1976-1982 for Peninsular Malaysia are shown in table 174, which does not include the contribution of fresh-water fish. Although fish landings have varied from year to year, the annual growth rate has averaged 4.7 per cent. On a per-capita basis, a gradual increase in the supply of marine fish has been noted. However, current per capita fishlandings stand at 47 kilograms (landed weight), slightly below the levels of preceding years.

Poultry and eggs are two important sources of animal protein in Peninsular Malaysia. Table 175 shows rising trends in the production of poultry meat and eggs on a per-capita basis. It may be seen that in 1976, production of eggs was 2,163 million. In 1979, production declined to 1,909 million. Production of poultry meat, which stood at 98,000 metric tons in 1976 increased to 108,000 metric tons in 1979.

The average annual growth rates for rice production, fish landings, poultry and egg production are shown against population growth rate in table 176. It is evident that the rates of production of fish, eggs and poultry have kept pace with population growth, while the production of rice has lagged behind the population growth rate over the late 1970s. The low rate of growth in rice production in recent years has been due to extremely dry weather, disease and attacks by insect pests in the major paddy-producing areas of the country. In the table, production statistics for

Table 174. Marine fish landings, Peninsular
Malaysia, 1970-1982

Year	Mid-year population	Fish landings (thousands of metric tons)	Landed weight (kg per capita)
1970	9 146 681	294	33
1972	9 624 214	306	33
1974	10 152 808	433	44
1976	10 614 469	411	39
1978	11 133 732	565	51
1980	11 422 086	624	55
1982	12 039 195	567	47

Sources: Malaysia, Agriculture in Peninsular Malaysia (Kuala Lumpur, Ministry of Agriculture, December 1976).

Malaysia, Vital Statistics Peninsular Malaysia, 1979 (Kuala Lumpur, Department of Statistics, 1981).

Malaysia, Monthly Statistical Bulletin Peninsular Malaysia, March 1982 (Kuala Lumpur, Department of Statistics, 1982).

Malaysia, Vital Statistics Peninsular Malaysia, 1982 (Kuala Lumpur, Department of Statistics, 1984).

Malaysia, Monthly Statistical Bulletin Peninsular Malaysia, February 1984 (Kuala Lumpur, Department of Statistics, 1984).

Year	E	ggs	Poultry meat	
	Production (millions)	Per capita consumption (per annum)	Production (thousands of metric tons)	Per capita consumption (kg per annum)
1970	1 130.2	120	60.9	6.8
1972	1 410.0	152	65.8	7.1
1974	1 807.0	185	78.2	8.0
1976	2 163.0	209	97.9	9.4
1978	2 182.4	200	103.9	9.5
1979	1 909.1	170	107.8	9.7

Table 175. Poultry meat and egg production, Peninsular Malaysia, 1970-1979

Sources: Malaysia, Agriculture in Peninsular Malaysia (Kuala Lumpur, Ministry of Agriculture, 1976). Malaysia, Statistical Handbook, Agriculture 1981 (Kuala Lumpur, Ministry of Agriculture, 1981).

Table	176.	Average	annual	growth	n rates	s for
		populatio	on and	major	food	pro-
		duct,	Penins	sular	Mala	iysia,
		1960-198	82			•

• • • • • •	Period	Average annual growth rate (per cent)
Rice	1965 - 1975	6.5
	1977 - 1981	1.8
Fish	1960 - 1975	10.5
	1976 - 1982	5.5
Egg	1960 - 1975	8.9
	1976 - 1979	4.1
Poultry	1960 - 1975	10.5
	1976 - 1979	3.3
Population	1957 - 1975	2.5
	1976 - 1980	2.6

Sources: Tables 173-175.

Malaysia, Fourth Malaysia Plan 1981-1985 (Kuala Lumpur, Government Printer, 1981).

fish, poultry and eggs do not take into account amounts exported, or in the case of fish, trash fish that is used as fish meal or fertilizer.

2. Food availability (food balance sheets)

Each food item potentially available for human consumption may be estimated according to the balance sheet technique. In order to compute the quantity of each food item available for human consumption, one takes production, adds imports, subtracts exports, adds or subtracts changes in stocks and subtracts uses for seeds and animal feed, and post-harvest losses.

The per capita availability of each food item for human consumption is then obtained by dividing the food available by the population during a particular period.⁴

Annual food balance sheets tabulated regularly will disclose trends in the over-all national food supply, changes in dietary patterns and whether as a whole available food supplies are adequate or not when compared to nutritional requirements at the national per capita level.

The details of two recent food balancesheets for Peninsular Malaysia are shown in tables 177-179. These tables show in detail food quantities and the contribution of calories and protein of

⁴ FAO/WHO, "Energy and protein requirements", FAO Nutrition Meeting Report, Series No. 52 (1973); and

W. Schulte, K. Becker and L. Naiken, "The food consumption: food balance sheets, food supplies" in K.K.P.N. Rao, ed., Food Consumption and Planning (Pergamon Press, 1976).

Table 177. Pattern of food availability, PeninsularMalaysia, 1970 and 1975

(Grams edible portions per capita per day)

	1970	1975
Cereals	359	380
Rice	291	289
Wheat flour	54	47
Maize	14	44
Starchy roots and tubers		
(including bananas)	78	48
Sugar	82	91
Pulses and nuts (including coconuts)	10	28
Vegetables and fruits		
(excluding bananas)	172	99
Fish	25	43
Meat and poultry	33	34
Eggs	21	28
Milk ^a	75	129
Fats and oils (separated)	22	15

Sources: Figures for 1970: B.M. Nicol, Report to the Federation Government of Malaysia on Food and Nutrition Planning, FAO, RAFE/20 (mimeograph, 1975).

For 1975: Sharifah and Lin, Ministry of Agriculture, Kuala Lumpur personal communication, 1977).

^a Fresh, powdered, condensed etc. total expressed as fresh milk.

the major food commodities to the Malaysian diet at the per capita level. They are compared with corresponding figures obtained by the Food and Agriculture Organization (FAO) for Asia and the Far East for the period 1964-1966.

Table 180 shows calorie and protein availability against per capita requirements at the national level based on Peninsular Malaysia's population structure in 1975. Table 181 shows recent trends in per-capita calorie and protein availability from previous and current food balance-sheet data.

From tables 177-180, the following points are evident:

(a) Peninsular Malaysia has been able to maintain over the years its supply of calories and protein, which stood respectively at 2,266 and 58 grams per capita for 1975;

(b) There has been an apparent increase in protein availability. At 58 grams per day, of which 37 per cent is believed to be contributed by animal proteins, current availability of high-quality proteins seems unsurpassed by most countries with developing market economies;

(c) Available calories and protein for 1975 are in excess of nutritional requirements, being 109 and 140 per cent, respectively, based on estimates of per capita requirements for energy protein at the national level.

The above may be gratifying, but it cannot be over-emphasized that food balance-sheet data merely indicate the quantities of food potentially available to the consumer, but not the actual amounts of food consumed. They do not reveal how food is distributed among different populations or socio-economic, rural and urban groups within the country. They also take no account of storage and cooking losses, plate waste or amounts fed to domestic animals.

Poleman recently drew attention to the following major limitations of the food balance-sheet approach to assessing nutritional status:

(a) it pre-supposses a wealth of agricultural and food statistics;

(b) it assumes a homogeneous population with similar food habits;

(c) there is still insufficient knowledge on nutrient requirements to allow the use of a standard against which the food balance sheet estimates can be judged.⁵

All the above constraints certainly apply to Malaysia. None the less, food balance sheet data do provide an approximate picture of the over-all food situation in the country, and are necessary for national and nutritional planning. They also serve to stimulate the collection of better food statistics, and it can be expected that future balance sheets will become progressively more reliable.

3. Food consumption and distribution

The national per-capita availability of energy and protein has been analyzed in detail, but this

⁵ T.T. Poleman, "World land: a perspective", Science, vol. 188 (1975).
		Developing m	arket			
	1970		1975		and Pacific 1964-1966	
	(g per capita/day)	(per cent)	(g per capita/day)	(per cent)	(g per capita/day)	(per cent)
Cereals	27.3	52.5	28.0	47.7	30.4	61.7
Starchy and other foods	1.1	2.1	2.7	4.6	0.8	1.6
Sugar	_	_		_	-	-
Pulses and nuts	2.0	3.8	4.2	7.2	8.0	16.2
Vegetables and fruits	1.8	3.5	2.3	3.9	1.9	3.9
Meat and poultry	5.8	11.1	5.6	9.5	1.4	2.8
Eggs	2.7	5.2	3.6	6.1	0.2	0.4
Fish	8.5	16.3	8.0	13.6	2.4	4.9
Milk	2.4	4.6	4.3	7.3	3.7	7.5
Total protein	52.0		58.7		49	
Animal protein	19.2		21.5		8	
Share of animal protein in total		37		37		16

Table 178. Protein availability in grams per capita per day, Peninsular Malaysia, 1970 and 1975, and Asia and Pacific, 1964-1966

Sources: Peninsular Malaysia, 1970: Nicol, B.M., Report to the Federation Government of Malaysia on Food and Nutrition Planning, FAO, RAFE/20 (mimeograph, 1975).

Peninsular Malaysia 1975: Sharifah and Lin, Ministry of Agriculture, Kuala Lumpur (personal communication, 1977).

Asia and Far East: W. Schulte, K. Becker and L. Naiken, "The food consumption: food balance sheets, food supplies" in K.K.P.N. Rao, ed., Food Consumption and Planning (Pergamon Press, 1976).

		Penins	ular Malaysia		Developing market	
	1970		1975		and Pacific 1964-1966	
	(cal/capita/day)	(per cent)	(cal/capita/day)	(per cent)	(cal/capita/day)	(per cent)
Cereals ^a	1 294	59.5	1 326	58.5	1 317	66.3
Starchy and other foods	107	4.9	42	1.9	78	3.9
Sugar	259	11.9	364	16.0	165	8.3
Pulses and nuts	45	2.1	106	4. 7	150	7.6
Vegetables and fruits	60	2.8	43	1.9	56	2.8
Meat and poultry	80	3.7	85	3.8	24	1.2
Eggs	37	1.7	45	2.0	15	0,8
Fish	47	2.2	45	2.0	15	0.8
Milk	50	2.3	75	3.3	65	3.3
Fats and oils	193	8.4	135	6.0	106	5.3
Total	2 172		2 266		1 990	

Table 179. Energy availability in calories per capita per day, Peninsular Malaysia, 1970 and 1975and Asia and Pacific, 1964-1966

Sources: Same as for table 178.

^a Wheat flour contributed to 9.5 and 12 per cent of calories, respectively, for 1970 and 1975.

	Total calorie (per capita/day)	Calories as per cent of requirement	Protein (g per capita/day)	Protein as per cent of requirement
Requirement for Peninsular Malaysia (population 1975)	2 085		42 ^a	
Food balance sheet 1970 (Peninsular Malaysia)	2 172	104	52.0	124
Food balance sheet 1975 (Peninsular Malaysia)	2 266	109	58.7	140

Table	180.	Nutritional	adequacy	of diet,	Peninsular	Malaysia,	1970 and	1975
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Sources: Calculated from appendices A and B.

Tables 178 and 179.

^a Protein score = 70

Table 181. Per capita availability of calories and protein per day, Peninsular Malaysia, 1957-1975

	1957-1961	1961	1964-1966	1968	1970	1975
Calories	2 268	2 250	2 200	2 103	2 172	2 266
Protein (g)	50	51	49	51	52	58.7
Per cent animal protein	33	29	30	30	37	37
Protein-to-calorie ratio	8.8	9.9	8.9	9.7	9.6	10.4

Source: Y.H. Chong "Aspects of ecology of food and nutrition in Peninsular Malaysia," Journal of Tropical Pediatrics and Environmental Child Health, vol. 22, Monograph No. 47 (1976), p. 237.

has given no indication of actual food consumption and distribution.

Some idea of the latter may be seen from the 1973 National Household Expenditure Survey (table 182). It shows that richer households spend more money monthly on food than poor households, namely up to \$M50 per head, while the poorest households spend as little as \$11 per capita. Food expenditure expressed as a percentage of total expenditure however, varied inversely with the actual amounts spent on food; poor households spent between 50-60 per cent of their total expenditure on food, whereas considerably less than 50 per cent of household expenditure went to food in the richer families. The above relationship between consumer's income and food expenditure takes into consideration Engel's law and the modified Allen law of food consumption. Engel's law states that the poorer the family, the greater is the total expenditure for food, while the Allen law states that "as income increases, the proportion of the budget devoted to food decreases while that devoted to luxuries increases".⁶ Table 183 shows the incidence of poverty by sector and urban-rural stratum for Peninsular Malaysia for 1975 and 1980. In 1975, 54.1 per cent of the rural population was living below the poverty level. This declined to 37.7 per cent in 1980. Nevertheless, such high levels of poverty, especially in the rural sector, indicate that a large proportion of the population have to spend

⁶ FAO, chap. 24, "Food production" and chap. 25, "Food marketing" in *Nutrition in Preventive Medicine*, WHO Monograph Series No. 62 (Geneva, WHO, 1976).

Household expenditure class:	\$49 and below	\$50 - \$99	\$100 - \$149	\$150 - \$199	\$200 - \$299	\$300 - \$399	\$400 - \$499	\$500 - \$599	\$600 - \$699	\$700 - \$799	\$800 and above
No. of households	278	962	1 182	1 00 9	1 387	838	558	314	214	144	399
Average total expenditure	35	77	124	174	246	346	444	546	643	744	1 337
Food expenditure per capita	11	13	16	19	22	27	31	35	35	40	50
Per cent expenditure on food	60	62	59	56	52	49	47	45	43	42	28

Table 182. Monthly household expenditure, Peninsular Malaysia, 1973 (Malaysian dollars)

Source: Malaysia, Department of Statistics, Kuala Lumpur, 1977.

Table 183. Incidence of poverty by sector and urban-rural stratum,Peninsular Malaysia, 1975 and 1980

Sector/stratum Agriculture Non-agriculture Total Rural	Percentage incid	ence of poverty	Percentage distribution of the poor		
	1975	1980	1975	1980	
Agriculture	63.0	46.1	69.0	66.6	
Non-agriculture	26.2	16.8	31.0	33.4	
Total	43.9	29.2	100.0	100.0	
Rural	54.1	37.7	87.4	85.3	
Urban	19.0	12.6	12.6	14.7	
Total	43.9	29.2	100.0	100.0	

Source: Noor Laily binti Dato' Abu Bakar and others, Malaysia National Population and Family Development Programme (Kuala Lumpur, National Family Planning Board, 1982).

higher proportions of their money on food. Such poverty could lead to deficiencies in the nutrients essential to growth.

Surveys of household food consumption are valuable in that they show how food is distributed within a country and within different community groups.⁷ A one-day household food consumption survey conducted on 87 rural Malay families in coastal districts in Telok Datok in 1969 showed that 24 per cent of households had deficient calorie intake, while 14 per cent of households had unsatisfactory protein intake.⁸ Another recent food consumption survey of rural households in Ulu Jempol, showed that although the average per capita protein intake was 55 grams, only 7 grams, or 13 per cent, originated from animal sources.⁹ This amount is certainly well below the 37-per cent share in total available protein of animal proteins, derived from balance sheet studies.

A socio-economic survey conducted by the Faculty of Resources, Economics and Agribusiness of the Agriculture University, Serdang¹⁰ showed that the mean daily per capita calorie intake in representative households of 15 out of 20 kampongs may be regarded as below 2085 calories, a standard used in the present report for judging the adequacy of the national diet (cf. table 180 and appendix A).

⁷ Emma Reh, "Food consumption surveys" in K.K.P.N. Rao, ed., op. cit.

⁸ J. Jackson, WHO Assignment Report on Applied Nutrition in Malaysia (WPR/393/70), (mimeograph).

⁹ N. Kandiah and J.B. Lim, *Institute of Medical Research* (*IMR*) Rural Health Study, No. 1, Bulletin No. 17 (Kuala Lumpur, IMR, 1976).

¹⁰ Report of Socio-Economic Survey of Sri Gading Constituency, November 1975.

The above evidence suggests that the diets of those belonging to the lower socio-economic orders and of rural people are likely to be deficient in both calories and protein, and that the seemingly adequate per-capita energy and protein availability, as shown in the food balance sheet, is certainly not reflected in actual food consumption among these groups.

In contrast, in the urban sector available evidence suggests that for the working adult, the intake of calories and protein does not pose a problem. Table 184 shows calorie and protein content, obtained by chemical analysis, of some common Malaysian meals and snacks. These lunches are well within the financial means of the majority of urban workers, and as one of three meals taken a day, they offer a substantial proportion of daily adult energy and protein requirements: on average about 1/3 of the daily adult energy and about $\frac{1}{2}$ of the protein requirement.

C. MALNUTRITION

1. Types of malnutrition

Good nutrition is now known as essential requirement of human development, but the

effects of malnutrition as obstacles to socioeconomic development have only recently been recognized. As in many rapidly developing countries, the nutritional problems of Malaysia have two facets. Among the disadvantaged poor, whether they live in the rural inland areas or the city of Kuala Lumpur, protein-energy malnutrition (PEM) whether in its severe or moderate forms, still prevails.¹¹ Severe PEM is often accompanied by diarrhoea, concurrent infections, suppressed immune response and associated vitamin and mineral deficiencies, and is often fatal if not treated in time.

R. George and others, "Severe protein-calorie malnutrition in Kuala Lumpur", Journal of Tropical Pediatrics and Environmental Child Health, 1977; and

S. Balakrishnan, "Severe protein-calorie malnutrition in Kota Bahru, Kelantan", Proceedings of 18th SEAMEO-TROPMED Seminar on Current Concepts of Diagnosis and Treatment of Parasitic and Tropical Disease (Kuala Lumpur, 1977).

Meal	Calories	Protein (g)	Fat (g)	Content
	f 767	28	20	Rice, beef and fish
Lunch (people's restaurant)	{ 874	27	51	Rice, soybean curd, fish and egg
	745	24	38	Rice, fish and tempeh (soybean dish)
Fried kueh teow	530	15	29	Rice noodles, egg and cockles
Fried kueh teow (cantonese)	800	25	36	Rice noodles, meat and vegeta- bles
Nasi lemak	492	15	15	Rice, fish and egg
Nasi beriyani	664	29	12	Rice and chicken
Fried noodles (Hokkien)	1 177	35	50	Wheat noodles and meat
Mee goreng (Indian)	595	21	29	Wheat noodles and meat
Chicken rice	476	20	15	Steamed chicken and boiled rice
Rice and roast pork	571	23	21	Boiled rice with roast pork in soy sauce
Curry laksa	752	23	42	Rice noodles, cockles and curry
Average all meals	703	24	30	
Daily requirement (adult male)	2 530	53		

Table 184. Calorie, protein and fat content of commonly purchased meals, Malaysia

Source: E.S. Tee and T.K.W. Ng., Division of Nutrition, Institute for Medical Research, Kuala Lumpur (unpublished data).

¹¹ Y.H. Chong, "Aspects of ecology of food and nutrition in Peninsular Malaysia", Journal of Tropical Pediatrics and Environmental Child Health, vol. 22, Monograph No. 47 (1976);

Y.H. Chong, "Malnutrition, food patterns and nutritional requirements in south-east Asia", Proceedings of Workshop on Interaction between Agriculture, Nutrition and Food Science, United Nations University and IRRI, Los Baños, Philippines, 1977;

However from the viewpoint of public health, the effects of the less severe forms of malnutrition are more serious and probably more farreaching, causing considerable ill-health, physical retardation, impaired mental performance, loss in productivity and declines in the quality of life.¹²

The problems of protein-energy malnutrition, its associated vitamin deficiencies and nutritional anaemia due to lack of iron have been reviewed in some detail recently.¹³ Here it is sufficient to say that the weights of Malaysian children deviate markedly from well-nourished Canadian or United States children, particularly during the immediate post-weaning period, and continue to remain low at school age. This weight deficit is most noticeable amongst rural inland children and is intermediate in children living in coastal villages, while urban children appear least affected (figure 12). Among rural inland children,

¹³ Y.H. Chong, "Malnutrition, food patterns...".

there appeared a greater prevalence for "wasting" (low weight-for-height) during the weaning and immediate post-weaning period compared to "stunting" (low height-for-age), which only appeared to increase with age after the weaning period (figure 13). Wasting gives a measure of current status of malnutrition while stunting reflects the effects of a previous history of chronic malnutrition.¹⁴

In striking contrast, obesity and hyperlipidemia are now seemed common among more affluent city dwellers. Jones¹⁵ and Quah¹⁶ have drawn attention to the moderately high prevalence of over-weight individuals in the hospital environment and in the armed forces, respectively (table 185). Elevated levels of serum cholesterol and triglycerides were also moderately prevalent

¹⁶ Quah Sek Leong, Nutritional Adequacy of Present Normal Armed Forces Ration Scale, Defense Research Centre Technical Report No. 10.



Per cent of Harvard Standard



Source: Chong, Y.H., "Malnutrition, food patterns and nutritional requirements in south east Asia", Proceedings of Workshop on Interaction between Agriculture, Nutrition and Food Science, United Nations University and IRRI, Los Banos, Philippines, 1977.

¹² J.M. Bengoa, "The problem of malnutrition", WHO Chronicle, vol. 28, 1974; and

J. Cravioto and E.R. Delicardie, "Malnutrition in early childhood", Food and Nutrition", FAO, vol. 2 (1976).

¹⁴ J.C. Waterlow, "Note on the assessment and classification of protein-energy malnutrition", *Lancet*, vol. 2, No. 87.

¹⁵ J.J. Jones, "A comparative study of the prevalence of adult obesity in three racial groups of Kuala Lumpur", *Medical Journal of Malaysia*, vol. 30, No. 256.

Figure 13. Prevalence of "wasting" and "stunting" in rural children, Malaysia



Source: Chong, Y.H., "Malnutrition, food patterns and nutritional requirements in south east Asia", Proceedings of Workshop on Interaction between Agriculture, Nutrition and Food Science, United Nations University and IRRI, Los Banos, Philippines, 1977.

Table 185. Obesity in Malaysians

(expressed as a percentage of total subjects)

	Ages				
	31-40	41-50	50+		
Men ^a					
Malay	44	20	33		
Chinese	4	20	8		
Indian	24	27	27		
Women ^a					
Malay	20	33	8		
Chinese	7	20	56		
Indian	50	27	38		
Malaysian armed forces ^b	38 ^b	43	42		

Sources: J.J. Jones, "A comparative study of the prevalence of adult obesity in 3 racial groups of Kuala Lumpur", Medical Journal of Malaysia, vol. 30 (1976), p. 256.

S.L. Quah, Nutritional Adequacy of Present Normal Armed Forces Ration Scale, Defence Research Centre, Technical Report No. 10 (1977).

^a The criteria for obesity is 20 per cent above the "desirable" weights of Americans of the same age and height with a "light frame".

^b A Quetelet index in excess of 23.5 was used as an index of obesity. The index is defined as wt/ht², where weight is expressed in kilograms and height in metres.

amongst middle-aged subjects in apparent good health, with hypertriglyceridemia appearing to be even more common than hypercholesterolemia¹⁷ (tables 186 and 187).

Among the urban population, coronary heart disease is rising and is now second to cancer as a major cause of death.¹⁸ Both hyperlipidemia and obesity are important risk factors to the early development of coronary heart disease and may be regarded as another form of malnutrition. Their alleviation by dietary means should be included in any strategy for nutritional improvement.

2. Indicators of rural malnutrition

The nutritional intake of the rural population can be indicated on the basis of available empirical data and findings of surveys that were conducted on Malays. In order to assess the real magnitude of nutritional deficiency, it is necessary to take into consideration the actual food consumption of the population of a given area at different levels of income. The Institute of Medical Research conducted a series of community

¹⁷ Y.H. Chong and K.L. Khoo "Serum Lipid levels and the prevalence of hyperlipidemia in Malaysia", *Clin. Chim. Acta.*, vol. 65, No. 143.

¹⁸ Y.H. Chong, "Diet as a risk factor in coronary heart disease", Journal of Medical Health and Laboratory Technology, vol. 2 (Malaysia, 1975).

Age	H	Health		Ishaemic heart disease		
	Per cent	Share/total	Per cent	Share/total	(mg/dl)	
30-39	20	40/197	19	33/195	270	
40-49	7	26/351	12	41/368	295	
50+	5	7/140	8	30/357	300	

 Table 186. Prevalence of hypercholesterolemia, Malaysia

Source: Y.H. Chong and K.L. Khoo, "Serum lipids levels and the prevalence of hyperlipidaemia in Malaysia", Chin. Chim. Acta., vol. 65 (1975).

Age	Healthy		Ishaemic l	Criteria	
	Per cent	Share/total	Per cent	Share/total	(mg/dl)
30-39	27	60/222	34	61/179	195
40-49	28	102/361	36	138/379	195
50+	20	27/133	29	105/361	195

Table 187. Prevalence of hypertriglyceridemia, Malaysia

Source: Chong, Y.H. and K.L. Khoo, "Serum lipids levels and the prevalence of hyperlipidaemia in Malaysia", Chin. Chim. Acta., vol. 65 (1975), p. 143.

nutritional assessments surveys in the states of Kelantan, Johore, Kedah and Perak over the years 1979-1983. The main objectives of these surveys were to determine the type of magnitude of nutritional problems in these villages. A total of 548 houses (45 per cent of all houses in the study area) were written to and their occupants were interviewed. Some of the main findings relevant to the concerns of this chapter are presented below.

(a) Household size and income

Table 188 shows the household and per capita income of the four kampongs that were covered by surveys. The average household consisted of 5.7 persons. The table shows that large households with more than seven members had significantly higher incomes than smaller households (significant at 0.001 level). A low but significant level of correlation (r of 0.27, significant at 0.001 level) was found between household income and household size. Despite this, the per capita income of larger households was significantly lower than that of smaller households. This suggests that per capita income is a better indicator of poverty than household income, as shown in table 188. From table 189, households with a monthly income of less than \$M290 spend about 64 per cent of their household income of more than \$M290, spend only about 48 per cent on food.

Correlative studies were undertaken to discover the relationship between per capita income and food intake. Households were divided into two groups on the basis of per capita monthly income of \$M50 (poverty line). Their mean percapita calorie and protein intake were compared, as in table 190. The table shows that the per capita calorie and protein consumption of households below the poverty line was significantly less compared to households above that line, thus confirming the association between income and food intake.

(b) Household food patterns and consumption

Food consumption patterns for poverty-level kampongs in various locations are listed in table 191 and compared with the food available for Peninsular Malaysia derived from food balance sheets for 1971-1977.

	Kota Baru	Mersing	Baling	Perak Tengah	Combined
Household income					
<7 persons/household	207 ± 133	176 ± 103	197 ± 121	213 ± 118	200 ± 119
Number of households	63	77	91	124	355
> 7 persons/household	257 ± 142	207 ± 113	222 ± 163	284 ± 132	247 ± 143
Number of households	37	33	54	65	189
Per capita income:					
< 7 persons/household	55 ± 55	44 ± 24	45 ± 29	55 ± 32	50 ± 17
Number of households	63	77	91	124	355
>7 persons/household	30 ± 15	26 ± 14	28 ± 20	33 ± 15	30 ± 17
Number of households	37	33	54	65	189

Table 188. Household and per capita income for poverty-level kampongs, mean and standard deviation, Malaysia (Malaysian dollars)

Source: Y.H. Chong and others, Status of Community Nutrition in Poverty Kampongs (Kuala Lumpur, Division of Human Nutrition, Institute for Medical Research, 1984), p. 17.

r					
	Kota Baru	Baling	Perak Tengah	Combined	
Per cent income spent on food	52 ± 22	54 ± 22	69 ± 17	60 ± 21	
Number of households	85	139	189	413	
Per cent income spent on food for households with					
Monthly income < \$M290	56 ± 22	58 ± 20	73 ± 16	64 ± 21	
Number of households	66	116	137	319	
Monthly income > \$M290	43 ± 20	33 ± 16	56 ± 14	48 ± 18	
Number of households	19	23	52	94	

Table 189. Household income and food expenditure as a per cent of income, poverty-level kampongs, Malaysia

Source: Y.H. Chong and others, Status of Community Nutrition in Poverty Kampongs (Kuala Lumpur, Division of Human Nutrition, Institute for Medical Research, 1984), p. 18.

The staple food, rice, was eaten in virtually the same amounts in all kampongs, but the mean amount eaten, 260 grams, was considerably less than the 306 grams that was available on a contiguous basis. A substantial amount of wheat flour and its products was eaten in the kampongs. The consumption of sugar was variable; those in kampongs in Perak Tengah consumed nearly as much as what was available per capita for the country, but sugar consumption in Kota Bahru and Baling was considerable lower. Larger amounts of roots and tubers were eaten in these kampongs compared to the availability figure for the country.

An outstanding feature of the kampong diet was the relatively high consumption of fish, which ranged from 67 grams per capita daily in Baling to 115 grams per capita daily in Kota Bahru. For all kampongs, mean fish consumption was 95 grams per capita daily, which was almost double that

Table 190. Relationship between income and food intake (mean and standard deviation) in poverty-level kampongs, Malaysia

	Monthly per	Level of	
	< \$M50	> \$M50	of difference
Per capita calorie intake	1 840 ± 735	2 104 ± 553	p < 0.01
Per capita protein intake (grams)	55 ± 17.8	65 ± 17.2	p < 0.01
Number of households	335	100	

Source: Same as for table 189, p. 46.

Food item	Kota Bahru 1979	Mersing 1981	Baling 1982	Perak Tengah 1983	Combined kampongs	Food balance sheet, Peninsular Malaysia 1971-1977
Rice	260	261	259	260	260	306
Wheat flour	25	74	57	58	54	68
Wheat products	• • •	36	12	19	22	• • •
Roots and tubers	22	29	12	25	22	16
Sugar	43	90	52	86	68	93
Fats and oils (separated)	20	31	20	29	25	21
Pulses and nuts	7	13	18	9	12	18
Fish (including dried fish and other seafoods)	115	99	67	97	95	54
Meat and poultry	7	13	16	21	14	57
Eggs	8	10	8	14	10	21
Milk	6	25	12	16	15	29
Vegetables and fruit	73	70	88	225	114	256

Table 191. Food consumption pattern in poverty-level kampongs, Malaysia (Mean in grams edible portion per capita)

Source: Same as for table 189, p. 38.

Note: Food balance sheet data calculated by author.

Number of households surveyed in Kota Bahru, Mersing, Baling and Perak Tengah were 87, 110, 146 and 160, respectively.

available per head per day for Peninsular Malaysia over the period 1971-1977. In contrast, meat and poultry consumption of 14 grams per head per day in the poverty-level kampongs was low compared to availability and to fish consumption.

The consumption of milk, eggs, vegetables and fruit in the poverty-level kampongs appeared considerably less than what was available according to the food balance sheet.

(c) Adequacy of calorie and protein consumption

Table 192 shows that daily per-capita calorie consumption varied from 1,648 in Kota Bahru to 2,106 in Mersing, with an over-all mean of 1,874. Protein consumption varied from 49 grams per capita daily in Baling to 39 grams per capita daily in Perak Tengah.

When the calories and protein consumed are expressed as a percentage of nutritional

Nutrients	Kota Bharu	Mersing	Baling	Perak Tengah	Combined kampongs
Calories	1 648	2 106	1 729	2 016	1 874
Recommended ^a calorie intake	2 080	2 156	2 062	2 004	2 075
Calories as per cent of recommended					
intake	79	98	84	101	90
Protein (grams)	52	55	49	59	53
Recommended ^a protein intake	48	42	45	42	44
Protein as per cent of recommended					
intake	110	131	109	140	120
Fat (grams)	28	46	32	40	37

Table 192. Calorie, protein and fat intake in poverty-level kampongs, Malaysia (Per capita daily)

Source: Same as for table 189, p. 40.

Note: Number of households surveyed in Kota Bahru, Mersing, Baling and Perak Tengah were 87, 110, 114 and 160, respectively.

^a Based on the age and sex composition of the households studied.

requirements, it may be noted that there was a shortfall in mean energy consumption in nearly all the kampongs. There was an over-all 10 per cent deficit in energy intake.

In contrast with calorie consumption, protein consumption appeared satisfactory, for when taken as a whole there was an excess of 20 per cent of protein over the requirement. However, owing to uneven distribution, not all the households enjoyed the excess.

Further analysis of the distribution of calorie consumption among individual households revealed that 34 per cent of households actually suffered a deficit of protein.

(d) Growth retardation (protein-energy Malnutrition)

The prevalence of malnutrition in pre-school children is presented in table 193. It is clear from this table that the magnitude of weight and height indices did not seem to differ markedly from one locality to another.

For all kampongs under survey, the prevalence of chronic undernutrition, or stunting, was 43 per cent, amount acute malnutrition, or wasting, was 5 per cent, revenue chronic malnutrition, or a combination of stunting and wasting, 3 per cent and of underweight was 37 per cent.

When the growth achievements of povertylevel kampong children relative to National Center for Health Statistics (NCHS) growth references and the growth of local urban counterparts are plotted, it is found that the median growth levels of preschoolers from poverty kampongs were inferior to those of urban children in Kuala Lumpur (figure 14).

Studies undertaken by the Institute for Medical Research identified nutritional problems which were related to income, family size, educational attainment, culture and environment. The incidence of poverty was high; of the 548 households studied, 78 per cent were found to be living below the poverty line. Chronic under-nutrition, i.e. stunting, was found in large proportions of preschool children (43 per cent). There is sufficient evidence to indicate that the children of povertylevel kampongs have not had the chance to reach their growth potential, but if given adequate food and an improved environment their growth would certainly not vary much from that of urban poor. There is also increasing evidence to show that even

	Kota Bahru	Mersing	Baling	Perak Tengah	All kampongs
"Stunted"	42	47	44	41	43
"Wasted"	5	6	4	6	5
"Stunted" and "wasted"	2	4	2	3	3
"Underweight"	30	38	35	41	37
"Poor" mid-arm circumference	_	12	30	25	22
Total number of children	77	128	283	238	726

Table 193. Prevalence of growth retardation in pre-school children (both sexes), poverty-level kampongs, Malaysia (Percentage)

Source: Y.H. Chong and others, Status of Community Nutrition in Poverty Kampongs (Kuala Lumpur, Division of Human Nutrition, Institute for Medical Research, 1984), p. 23.

Figure 14. Comparative growth achievement of pre-schoolers, poverty-level kampongs vs urban (Kuala Lumpur), Malaysia



Sources: Y.H. Chong, and others "Some results of recent nutrition surveys in West Malaysia with emphasis on anthropometry and nutritional biochemistry", Bulletin of Public Health Society, 1972.

Foo, unpublished data, 1972.

moderate malnutrition may affect the finer aspects of cerebral function such as cognitive skills, memory and intelligence.¹⁹ Furthermore, the moderately malnourished child reacts slower, is more timid and passive to environmental stimuli.²⁰

The Government introduced the Applied Food and Nutrition Programme (AFNP) in 1969 to reduce pockets of malnutrition in the country with emphasis given to rural areas. This project was first implemented in Kuala Lumpur, Selangor. By 1978, it covered 46 districts in Peninsular Malaysia. The operating expenditure of this project has increased significantly, from \$M320,000 in 1976 to \$M19 million in 1978. Out of the total budget for the programme, the bulk of the money has been allocated to states that have high mortality rates, such as Kedah, Kelantan and Trengganu.

The Supplementary Feeding Scheme of Primary Schools which is part of AFNP began implementation at the end of 1976. Its main objective has been to improve nutritional levels among rural school children in the 46 AFNP districts through the provision of food that is sufficient in protein content. The school meals provided contained about 400 calories and 10-11 grams of protein per child per day, thus contributing approximately 1/5 and 1/3 of daily energy and protein requirements, respectively. In 1978, schools involved in this scheme numbered 2,188, and pupils more than 4,000,000.

To further improve the nutritional intake of school children, the Education Ministry launched a Primary School Milk Project in September 1984. This Project provided free milk to underweight and poor children so as to enable them to obtain a source of nutritional food.²¹ In the pilot project, 21 districts were covered, including 200,000 pupils. Phase II covered 29 districts, which contained almost 1.5 million pupils. The Ministry plans to include another 27 districts in 1985. This will involve almost 1 million more primary school children in the country. Such a project will enable school children to obtain at least part of the food requirement essential to growth and development.

D. BIOLOGICAL AND ECONOMIC FOOD DEMAND

1. Nutrient requirement and biological food demand

Nutrient requirement is defined as the least amount of energy and nutrients that are needed by normal people to grow, reproduce, work and maintain health. These requirements differ for individuals according to their age, body weight, activity, sex and physiological status.²

The main function of requirements is to serve as a standard for assessing the adequacy of an individual's dietary intake. They can also be used to estimate the total national food requirement, i.e. biological demand, if the total population and its sex and age distribution are known.

Daily energy and protein requirements for Malaysian males and females of various age groups have been calculated by Teoh.²³ From these standards, the average daily per-capita energy and protein requirements at the population level may be calculated (appendices A and B) according to procedures laid down by FAO/WHO.²⁴

Thus for Peninsular Malaysia in 1975, the per capita daily requirement for energy has been estimated at 2,085 calories and for protein at 42 grams (where protein score equals 70). These standards have been used to assess the adequacy of food balance-sheet data for the same year (see table 180). For 1990, the per capita calorie and protein requirements are estimated at 2,168 calories and 44 grams respectively (see appendices C and D).

With the above knowledge, the biological demand for any food may be calculated for

¹⁹ A. Chavez. and C. Martinez, *Growing Up in a Developing Community* (Institute of Nutrition of Central America and Panama, 1982);

A. Berg, *Malnourished People – a Policy View*, World Bank Poverty and Basic Needs Series (June 1981); and

D.A. McKay, "Nutrition infection and development: the ten-year follow-up of children in Wu Trengganu, Malaysia" in *Pro*ceedings of the Third Asian Congress of Nutrition, Jakarta, 6-10 October 1980 (Lembaga Ilmu Pengetahuan, 1983).

²⁰ Chavez and Martinez, op. cit.

²¹ The Malay Mail, 4 March 1984.

²² FAO/WHO, "Energy and Protien. . ."; and E.F. Wheeler, "Nutrition requirements" in S. Bourne, ed., op. cit.

²³ S.T. Teoh, "Recommended dietary intakes for Peninsular Malaysia", Medical Journal of Malaysia, vol. 30, No. 38.

²⁴ FAO/WHO, "Energy and protien...".

particular years.²⁵ Thus, given the per capita daily requirement for calories of 2,085 in 1975, the annual per capita requirement for rice for this year, assuming that half of total calories is derived from rice (table 179) and that one kilogram of rice supplies 3,500 calories, is as follows:

$$\frac{2085}{2} \times \frac{365}{3500} = 108.8 \text{ kilograms per capita}$$

Accordingly, for the entire population of Peninsular Malaysia in 1975, the biological demand for rice can be taken as 108.8 kilograms times 10,440,000, or 1,135,872 metric tons.

Along similar lines, and assuming a slight gain in the body weight of the average Malaysian male and female to 58 and 53 kilograms, respectively, by 1990 (the present weights of Malaysian males and females are assumed to be 55 and 50 kilograms, respectively), the projected annual per capita requirement for rice for 1990, assuming that there are no significant changes in rice-eating patterns, is as follows:

$$\frac{2168}{2}$$
 x $\frac{365}{3500}$ = 113 kilograms

For the entire population, the biological demand for rice in 1990 for Peninsular Malaysia would be 113 kilograms times 15,462,254, or 1,747,235 metric tons.

2. Economic food demand

Economic food demand, in contrast to biological food demand, is dependent on the money a community or household is able to spend on food, and is therefore correlated to total income.²⁶ Rich households, communities or countries spend more in absolute terms on food than do their poor counterparts. In the more fortunate circumstances, the nutrients supplied by economic food demand exceed those required by biological food demand. In poor countries, economic demand for food may not satisfy biological demand.

In Peninsular Malaysia, the market demand for rice has been shown to average 108 kilograms per capita for 1977-1981, against the current biological requirement of 108.6 kilograms per capita. Thus, current economic demand for rice is in proportion to biological requirement.

3. Forecasting food demand

The projection of effective food demand is important in establishing agricultural production targets within the framework of national development plans.²⁷ It is abundantly clear that projections of food demand will need to take into consideration both biological and economic demands. Brown has commented on the great complexities of food projections and pointed out how widely off target previous estimates have been.²⁸

Economists have used the following formula for projecting food demand:

Projected demand = demand for base year (1 + rate of growth of demand)

where rate of growth of demand = population growth rate x (changes in per capita income x income elasticity²⁹)

Pawley has estimated that the change in per capita income in developing countries will vary over the range 3-3.7 per cent per annum for the rest of the century, and that population growth will remain at 2.5 per cent until 1985 and 2.25 per cent thereafter. With these statistics, and assuming income elasticity of 0.4 per cent, Pawley estimates that the demand for food in developing countries would grow by 3.3 per cent per annum.³⁰ Assuming the latter also applies for rice in Peninsular Malaysia, the market demand for rice in 1990 can be computed in the following manner:

Taking 123 kilograms as the market demand for rice at the per head level for 1975, multiply this by the 1975 population of 10,438,137. A market demand of 1,283,890 metric tons of rice is

²⁵ Duckham, Jones and Roberts, eds., op. cit.

²⁶ Ibid.

²⁷ FAO, chap. 24, "Food production" and chap. 25...

²⁸ L.R. Brown, *By Bread Alone* (New York, Praeger Publishers, 1974).

 $^{^{29}}$ Income elasticity of demand measures change in demand as a result of changes in income. An income elasticity of 0.4 per cent for cereals means that if there is a 1 per cent increase in income, the demand for cereals will increase by 0.4 per cent. In poor countries, the average income elasticity for food is 0.5-0.8 per cent, while it is 0.1 or less in wealthy countries.

³⁰ W.H. Pawley, "World picture – present and future" in Duckham, Jones and Roberts, eds., op. cit.

obtained for the base year 1975. The increase in demand for rice by 1990 over the base year will accordingly be:

1,283,890 x
$$\frac{15}{100}$$
 x 3.3 metric tons
= 635,526 metric tons

Thus, the projected market demand for rice for Peninsular Malaysia by 1990, amounts to 1,283,890 plus 635,526 metric tons, or 1,919,416 metric tons, against the biological demand of 1,679,200 metric tons. This estimate of market demand (i.e. 1,919,416 metric tons) may be compared with the Ministry of Agriculture's forecast of a production level of 1,822,000 metric tons, on the basis of projected rice yield and land area under rice for 1990.

Several demand projections for rice and other food items such as fish, poultry and eggs for Peninsular Malaysia, 1990 have been authored separately by the Ministry of Agriculture^{3 1} and Leong, Devendra and Chong.^{3 2} Table 194 sets out these projections and their averages. It may be seen from this table that the average projected annual growth rates for production of fish and eggs over the period 1975-1990 are in fact lower than the corresponding average annual growth rates for 1970-1979. It is only in poultry that the projected average growth rate for 1975-1990 far exceeds the average growth rate for 1970-1979. (13.0 and 6.0 per cent, respectively).

E. RESOURCES FOR INCREASED FOOD PRODUCTION

It is now increasingly realized that expansion of agricultural productivity offers one of the best hopes for economic development and social progress in developing countries and assurance of peace and well-being in the world.^{3 3}

³³ S. Wortman, "Food and agriculture", *Scientific American*, vol. 235 (1976).

	1975		1990 Projected	demand	Increase	Percentage	Projected percentage	Percentage annual
	production	Source	Projection	Mean	in demand	increase	annual growth rate 1975-1990	growth rate 1970-1979
Rice								
(metric tons)	1 099 000	(a)	1 919 416)		855 340	78	5.2	3.0
		(b)	2 106 604 }	1 954 340				
		(c)	1837000)					
Fish								
(metric tons)	375 235	(b)	443 300]		128 618	34	2.3	7.7
		(d)	469 960 }	503 853				
		(c)	598 300 J					
Poultry								
(metric tons)	92 975	(b)	274 365	054 600	181 628	195	13.0	6.0
		(d)	274 840 🖇	274 603				
Eggs (number an- nually per								
capita)	183	(b)	313		130	71	4.7	6.6

Table 194. Projected market demand for some major food commodities, Peninsular Malaysia, 1990

Sources: (a) Present estimate.

(b) E.S.L. Leong, C. Devendra and Y.H. Chong, "Animal proteins: their availability and future demands for human consumption in Peninsular Malaysia", Bulletin No. 142 (Kuala Lumpur, Ministry of Agriculture and Rural Development, 1976).

(c) Malaysia, Agriculture in Peninsular Malaysia (Kuala Lumpur, Ministry of Agriculture, December 1976).

(d) B.M. Nicol, Report to the Federation of Government of Malaysia on Food and Nutrition Planning, FAO (RAFE/20), (mimeograph, 1975).

³¹ Malaysia, Agriculture in Peninsular Malaysia (Kuala Lumpur, Ministry of Agriculture, December 1976).

³² E.S.L. Leong, C. Devendra and Y.H. Chong, "Animal proteins: their availability and future demands for human consumption in Peninsular Malaysia", Bulletin No. 142 (Kuala Lumpur, Ministry of Agriculture and Rural Development, 1976).

There are four ways of increasing food productivity and availability:

(a) opening up new land for food crops or cash crops;

(b) intensifying production on land under cultivation;

(c) improving marketing, distribution and delivery systems to ensure equitable availability;

(d) Reducing population growth.

The factors involved in increasing agricultural productivity are physical, genetic, chemical and human. Physical factors include land, water. irrigation facilities, farm machinery and energy to power the last two. Genetic factors include improvements which can provide high-yielding, quick-maturing and disease-resistant varieties of crops and improved animal strains. Chemical factors include fertilizers and agro-chemicals for control of weeds, pests, diseases and safeguarding the health of livestock. Human factors are also important: farmers must be provided with sufficient economic incentives so as to produce more. assuring them of ready markets, guaranteeing minimum prices and the provision of credit and subsidies.³⁴

The reduction of pre- and post-harvest losses through wastage and spoilage, food conservation through promoting breast-feeding and discouraging over-eating, particularly among the affluent urban population, would all indirectly add to the total food supply. It was reported that in Muda region, 10 per cent of paddy grains remained on the stalk during threshing. If means could be found to conserve this loss, the cost recovered is estimated at \$M89 per acre, or \$M22 million per crop in the Muda area alone.^{3 5}

As part of the long-range strategy of the Malaysian Government for rural and agrarian development, numerous land development schemes have now been launched. These will add several more million acres for cash and food crops. Some of these land development projects are: (a) FELDA (Federal Land Development Authority): 200,000 hectares of oil palm and 100,000 hectares of rubber. For the years 1981-1985, a target of 543,500 hectares has been marked for development;

(b) FELCRA (Federal Land Consolidation and Rehabitation Authority): This scheme will develop 25,500 hectares of fringe schemes and 1,600 hectares for youths during the period 1981-1985. Together with its consolidation and rehabilitation schemes, FELCRA will develop a total of 60,700 hectares;

(c) RISDA (Rubber Industries Smallholders Development Authority): RISDA will continue to develop its new block-planting schemes, with a target of 15,400 hectares;

(d) State government land authorities: These agencies complement the role of the federal land development agencies, and are targetted at development of 217,200 hectares;

(e) Jengka Triangle in Pahang: 500 square miles;

(f) Pahang Tenggara: 1 million hectares;

(g) West Johore Project;

(h) Johore Tenggara: 300,000 hectares, with majority planted in oil palm,

(i) North Kelantan Project: 300,000 hectares.

It would appear that much of the new land has been marked for cash crops like oil palm and rubber, suggesting low expansion of land utilization for food crops. There is thus an even greater urgency for intensifying cultivation of existing rice areas with double cropping.

Apart from the Ministry of Agriculture, many other statutory bodies have also been set up by the Government to look into aspects of agricultural research, development, extension, processing, marketing and distribution, namely:

(a) MARDI, Malaysian Agriculture and Research Development Institute;

(b) LPN, Padi and Rice Marketing Board;

(c) FAMA, Federal Agricultural Marketing Authority;

³⁴ A.H. Baharuddin, "The food cash-crop economy of Malaysia: problems of balance and incentives", *Conference on food and Agriculture, Malaysia 2000*, University Pertanian Malaysia, Serdang, July 1977.

³⁵ D.J.B. Caverly and others, "Post-harvest losses of rice in Malaysia", Conference on Food and Agriculture, Malaysia 2000...

(d) MAJUIKAN, Fisheries Development Corporation;

(e) MAJUTERNAK, Livestock Development Corporation;

(f) FIMA, Food Industries Marketing Authority.³⁶

The establishment of so many of the abovementioned organizations concerned with food production and supplies argues well for Malaysia. But their numbers have also led to some duplication of effort and a lack of co-ordination. Unless these problems are overcome, the effectiveness of these organizations and their potential for increasing food supplies could be seriously curtailed.

³⁶ Malaysia, Agriculture in Peninsular Malaysia ..., and Mohd. Zain Karin and others, "Outlook on Malaysian agriculture", Conference on Food and Agriculture, Malaysia 2000...

F. OUTLOOK FOR INCREASED FOOD PRODUCTION

It is pertinent to examine whether the country has stretched its limits for increased food production. Certainly this does not appear to be so with respect to rice, as has been illustrated by the comparatively small percentage of land now under rice, and the fact that current rice yields in Malaysia have not reached the levels attained by some nations in Asia, such as Japan, Korea and China (figure 15).

According to the Ministry of Agriculture,³⁷ irrigation is one of the most important factors that has contributed to increased rice production. This is because the high-yielding, quick-maturing varieties of paddy need much more water in order to make maximum use of solar energy for

³⁷ Malaysia, Agriculture in Peninsular Malaysia...



Figure 15. Rice yield in Asia

Source: W.D. Hopper, "The development of agriculture in developing countries", Scientific American, vol. 235, (1976), p. 196. (All rights reserved, permission to reproduce figure is hereby gratefully acknowledged).

photosynthesis. Currently, about 68,000 hectares of land are provided with irrigation facilities for both single and double-cropping of paddy. This is addition to the 97,400 hectares that have been provided with similar facilities. This represents achievement of 67 per cent of the target.^{3 8}

Raj has contended that 10-20 times more water than necessary is now being used by paddy farmers in Malaysia. He has produced evidence to show that rice grown in shallow water has higher yields than that grown in deep water, as is currently practised. Raj went on to assert that there was sufficient irrigational water to sustain three crops on present paddy land, and that an annual production potential for rice of 5.5 metric tons per hectare was entirely possible given existing water resources.³

Another pre-requisite for double cropping, is the application of fertilizers. Although these are subsidized by the Government (in 1974, farmers paid only 50 per cent of the market price for urea), amounts applied are inadequate. Table 195 appears to show that fertilizer usage is highly satisfactory for Malaysia compared with that of some developed countries. However, it must be remembered that much of this fertilizer is used on rubber and oil-palm estates and not on food crops. Thus, additional application of fertilizers on food crops can be expected to result in further gains in yield.

³⁹ H.G. Raj, "Irrigate less and increase rice yield", Conference on Food and Agriculture, Malaysia 2000...

Table	195.	Fertilizer use, Peninsular Malaysia,
		1975 and selected developed coun-
		tries 1968/69

	Kilograms per capita	Kilograms per hectare	Year
Peninsular Malaysia	32	97	1975
Japan	23	245	1968/69
United Kingdom	34	97	1968/69
United States	64	32	1968/69

Source: Calculated from G. Borgstrom, World Food Resources (International Textbook Company, Ltd., 1974), table A26.

Note: Including urea, other N fertilizers, potash and phosphate fertilizers.

The threat of pest, virus and fungus disease to the paddy plant is worthy of immediate attention. The need for increased research and countermeasures in this direction is highlighted by the extensive damage caused by plant hoppers to paddy in Tanjong Karang. It was reported that these insects were highly resistant to insecticides.⁴ ⁰

Mention was made above of the 10 per cent of grain remaining on paddy stalks after threshing. If a more efficient threshing method were found, the amount of rice imported annually could be halved.

With regard to the expansion of fish catches, it is alarming to note that there has been a reversal in fish landings recently as a result of over-fishing. Marine biologists fear that fish catches are nearing their maximum sustainable limits owing to overexploitation. Marine life is also increasingly affected by countries of the world using the seas as a giant sink. Thus economists warn that further investments may follow the law of diminishing returns.⁴ However ocean fishing in the South China Sea has not been fully exploited and offers Malaysia opportunities for expanding its fish catches, while fresh-water fish farming (including that for shellfish and prawns) is another source which has scarcely been tapped.

Because they are eaten by all cultural groups, poultry and eggs are projected to be in relatively high demand, and the expansion of poultry and egg production should be encouraged and further intensified. Poultry is comparatively efficient in converting feed to protein, and birds can be selectively bred to lay eggs all year round. An important constraint to increased egg and poultry production however is the dependence on feed imports.

The rate of growth of the ruminant population (buffaloes, cattle, sheep, goats) in Peninsular Malaysia has been low.^{4 2} Some difficulties are expected in the expansion of milk and livestock production in view of genetic and feed constraints. The discovery that palm oil sludge, tapioca and

³⁸ Malaysia, Statistical Handbook Agriculture 1982 (Kuala Lumpur, Ministry of Agriculture, December 1981).

⁴⁰ The Malay Mail, 18 and 19 October, 1977.

⁴¹ L.R. Brown, "The world food prospect", *Science*, vol. 190 (1975).

⁴² C. Devendra, "Toward more food from livestock in Malaysia", Conference on Food and Agriculture, Malaysia 2000...

pineapple waste and non-protein sources of nitrogen such as ammonia, urea and poultry excreta can supplement the rations of beef and dairy cattle, will reduce excessive dependence on forage food and feed.^{4 3} The potential for increased ruminant production has yet to be fully exploited and it is worth noting that intensification of production will not cause competition with man for food.^{4 4}

G. CONCLUSION

Health, including nutrition, is dependent on the social and economic environment. Nutritional problems cannot be considered in isolation and must be handled together with available food supplies and programmes for socio-economic development.^{4 5}

The World Food Conference projected that the following growth rates of production must be sustained from 1976 onward in the developing countries: 3.3 per cent for rice, 4.7 per cent for fish and 4.4 per cent for meat.⁴⁶ For the period 1970-1979, the average annual growth rates in Malaysia for the production of food commodities

⁴⁵ WHO, "Health, population and development", WHO Chronicle, vol. 28 (1974); and

FAO, chap. 24, "Food production" and chap. 25...

⁴⁶ FAO, "Assessment of the world food situation – present and future", Food and Nutrition, vol. 8 (1975).

have exceeded considerably the United Nations estimate for required future growth with the exception of rice, which had an annual growth rate of 3.0 per cent for 1970-1979. Further, the average projected annual growth rates for 1975-1990 of these food commodities have also been shown to exceed United Nations estimates with the exception of those for fish. The latter may however be offset by the large projected annual growth for poultry meat (table 194). Thus. despite population growth of around 2.5 per cent per annum and increasing consumer demand for food, the evidence presented indicates that the prospects for feeding Malaysia's growing population are bright, barring adverse weather conditions, world economic crisis or political instability.

The current problem of malnutrition particularly among rural and urban disadvantaged groups is essentially a problem of uneven distribution of food; for the present, there is no evidence to indicate the presence of any gross food insufficiencies at the national per capita level. With the many land, agricultural and social development schemes now in operation and the intensification and expansion of agricultural resources to increase food productivity, prospects of social equity and fair food distribution for those presently regarded as disadvantaged, is good.

As purchasing power increases, food patterns in Malaysia may change to be more like those now seen in the developed countries. Nutritionists and public health workers have a role to play in influencing the life-styles and eating habits of people to ensure that the gains made in the conquest of under-nutrition are not followed by the adverse effects of over-nutrition.

⁴³ M.M. Chandapillai and T. Selvarajah, "The potential use of agricultural waste in livestock production in Malaysia", *Conference on Food and Agriculture, Malaysia 2000...*; and

S.H. Wittwer, "Food production: technology and research base", Science, vol. 188, No. 579.

⁴⁴ C. Devendra, loc. cit.

Appendix A.

	Age group (years)	Population	Individual requirement (calories)	Population distribution (per cent)	Contribution to total per 100 persons (calories)
	< 1	351 091	1 090 ^a	3.3	3 597
	1 - 3	927 043	1 360	8.8	11 968
	4 - 6	833 584	1 830	8.0	14 640
	7 - 9	820 576	2 190	7.8	17 082
Males	10 - 12	430 527	2 600	4.1	10 660
	13 - 15	414 425	2 450	4.0	9 800
	16 - 19	492 547	2 580	4.7	12 126
	20 - 39	1 457 370	2 5 3 0	13.9	35 167
	40 - 49	394 351	2 400	3.8	9 120
	50 - 59	282 185	2 280	2.7	6 156
	60 - 69	194 110	2 020	1.9	3 838
	70 +	125 547	1 770	1.2	2 124
Females	10 - 12	413 605	2 350	4.0	9 400
	13 - 15	398 958	2 260	3.8	8 588
	16 - 19	479 066	2 100	4.6	9 660
	20 - 39	1 455 132	2 000	13.8	27 600
	40 - 49	401 614	1 900	3.8	7 220
	50 - 59	288 625	1 800	2.8	5 040
	60 - 69	185 818	1 600	1.8	2 880
	70 +	137 852	1 400	1.3	1 820
Total		10 484 026		Total:	208 486
				Per capita:	2 085

Per capita energy requirement by age and sex, Peninsular Malaysia, 1975

Sources: Calculated following FAO/WHO, "Energy and protein requirements", FAO Nutrition Meeting Report, Series No. 52 (1973). Requirements from S.T. Teoh, "Recommended daily dietory intakes for Peninsular Malaysia, Medical Journal of Malaysia, vol. 30, No. 38 (1975).

^a Includes supplementary energy requirements of pregnant and lactating women.

Appendix B.

	Population	Average body weight ^a (kg)	Requirement per kg/per day (g)	Per capita requirement per day (g egg protein)	Total requirement (kg)
Infants ^b	<u></u>				
0 - 1 year	351 091				
Children					
1 - 3	927 043	13.4	1.19	15.94	14.777
4 - 6	833 584	20.2	1.01	20.4	17.005
7 - 9	820 576	28.1	0.88	24.7	20,268
Male adolescents					
10 - 12	430 527	36.9	0.81	29.9	12.873
13 - 15	414 425	44	0.72	31.7	13.137
16 - 19	492 547	53	0.60	31.8	15.663
Female adolescents					
10 - 12	413 606	38	0.76	28.9	11.953
13 - 15	398 958	4 5	0.63	28.4	11.330
16 - 19	479 066	50	0.55	27.5	13.174
Adults					
Male	2 453 563	55	0.57	31.4	77.042
Female	2 469 041	50	0.52	26.0	64.195
Allowance for pregnancy	(386 200)			5.5	2.124
Allowance for lactation	(351 091)			17.0	5.969
Total	10 484 026			26.7 ^c	279.510

Per capita protein requirement (safe level) by age and sex, Peninsular Malaysia, 1975

Sources: Same as for appendix A.

^a Body weights of adult males and females are taken arbitrarily at 55 kg and 50 kg, respectively. Those of children 1-3 years, 4-6 years, 7-9 years and 10-12 years are weights of reference children as cited in the source, with no adjustments made. For adolescents 13-15 years and 16-19 years, weights are adjusted to 80 and 97 per cent of 55 kg for males and 90 per cent and 99 per cent of 50 kg for females.

^b Requirements included under allowance for lactation.

^c Requirement for egg protein in $g = \frac{279510}{10484} = 26.7$ g egg protein or 42 g of protein of national diet. To convert egg protein to

protein of chemical score of 70, multiply by 1.43 and add 10 per cent for distribution losses from retail to consumption level.

Appendix C.

	Age group (years)	Population	Distribution (per cent)	Requirement (calories)	Contribution to total require- ment (calories per 100 persons)
	<1	445 004	2.9	1 090 ^a	3 161
	1 - 3	1 315 980	8.5	1 360	11 560
	4 - 6	1 263 538	8.2	1 830	15 006
	7 - 9	1 187 918	7.7	2 190	16 863
Male	10 - 12	560 100	3.6	2 600	9 360
	13 - 15	511 357	3.3	2 590	8 547
	16 - 19	611 112	4.0	2 725	10 900
	20 - 39	2 479 207	16.0	2 670 ^b	42 720
	40 - 49	636 562	4.1	2 540	10 414
	50 - 59	423 448	2.7	2 405	6 493
	60 - 69	238 894	1.5	2 135	3 202
	70 ' +	174 570	1.1	1 870	2 057
Female	10 - 12	538 620	3.5	2 350	8 225
	13 - 15	491 397	3.2	2 395	7 664
	16 - 19	588 190	3,8	2 225	8 455
	20 - 39	2 416 385	15.6	2 120 ^b	33 072
	40 - 49	641 870	4.2	2 015	8 463
	50 - 59	441 097	2.9	1 910	5 539
	60 - 69	265 354	1.7	1 695	2 881
	70 +	231 643	1.5	1 485	2 228
Total		15 462 246	100.0		216 810
				Per capita:	2 168

Per capita energy requirement by age and sex, Peninsular Malaysia, 1990

Sources: Same as for appendix A.

^a Including supplementary energy requirements of pregnant and lactating women.

b It is assumed that by 1990, the average male and female adult Malaysian (20-39 years) will weigh 58 kg and 53 kg, respectively.

Appendix D.

	Population	Average body weight (kg)	Requirement per kg/per day (g)	Per capita requirement per day (g egg protein)	Total requirement (kg)
Infants					
0 - 1 year	445 004				
Children					
1 - 3	1 315 988	13.4	1.19	15.94	20.977
4 - 6	1 263 538	20.2	1.01	20.4	25.776
7 - 9	1 187 918	28.1	0.88	24.7	29.342
Male adolescents					
10 - 12	560 100	36.9	0.81	29.9	16.747
13 - 15	511 357	46.4	0.77	35.7	18.255
16 - 19	611 112	56.3	0.60	33.8	20.655
Female adolescents					
10 - 12	538 620	38	0.76	28.9	15.566
13 - 15	491 397	47.7	0.63	30.0	14.742
16 - 19	588 190	53	0.55	29.2	17.175
Adults					
Male	3 952 681	58	0.57	33.1	130.834
Female	3 996 349	53	0.52	27.6	110.299
Allowance for pregnancy	(489 504)			5.5	2.692
Allowance for lactation	(445 004)			17.0	7.565
Total	15 462 254			27.85 ^a	430.625

Per capita protein requirement by age and sex, Peninsular Malaysia, 1990

Sources: Same as for appendix A.

^a Per capita requirement = $\frac{430.625}{15.462}$ g = 27.85 g egg protein = 43.8 g of protein of the national diet (after adjustment to protein score of 70 and allowance for 10-per cent loss from retail to consumption level)

XIV. LAW AND POPULATION*

A. LAW AND FAMILY PLANNING

Laws relating to marriage, childbearing, the family, taxation, immigration, social security, health and nutrition may have both direct and indirect effects on population growth.

International declarations, covenants and resolutions express increasing concern over population matters as they relate to human rights. This is voiced in the Universal Declaration of Human Rights, the Covenants on Economic, Social and Cultural Rights and on Civil and Political Rights, the Teheran Proclamation on Human Rights and the United Nations Declaration of Social Development and Progress. The Universal Declaration of Human Rights recognizes the right of privacy, the right to marry and form a family and declares that the family is the natural and fundamental group unit of society and is entitled to protection by society and the State. However, no mention is made of family planning. General Assembly Resolution 2211 (XXI) of 17 December 1966 recognizes inter alia the "sovereignty of nations in formulating and promoting their own population policies with due regard to the principle that the size of the family should be the free choice of the individual family". The Teheran Conference on Human Rights 1968 declared, "Parents have a basic right to determine freely and responsibly the number and spacing of their children" and at its plenary meeting adopted a resolution drawing attention to the connexion between population growth and human rights. The resolution stated, "the present rapid rate of population growth in some areas of the world hampers the struggle against hunger and poverty and in particular reduces the possibilities of rapidly achieving adequate standards of living including food, clothing, housing, medical care, social security, education and social services, thereby impairing the full realization of human rights". The General Assembly's Declaration on Social Progress and Development of 1969 recognizes that in order to

implement the right to family planning, families must be given access to information and the means necessary for the exercise of their rights.

These declarations, statements and resolutions indicate a trend to consider family planning as a basic human right, which includes not only the determination of the number and spacing of children but also the right to receive information about different family planning methods.

Malaysian population growth, though declining slightly in recent years, is still above 2 per cent per annum. This implies a doubling of the population in less than 35 years. A number of factors contribute to the persistently high rate of population growth: improved medical facilities, better sanitation and public health programmes and a higher standard of living, leading to a marked decline in the death rate (particularly that of infants), without a corresponding adjustment in birth control. The need to prevent the further acceleration of population growth is undoubtedly a matter of concern both nationally and internationally. This concern springs not only from the problem of feeding the additional population but also from the adverse effects of population growth, such as lower standards of living, insufficiency of welfare services, environmental pollution and higher crime and disease rates.

In the formulation of population control policy there is, of course, no desire among planners to counter over-population by policies designed to allow the death rate to rise to or exceed the level of the birth rate, since this would be both morally and legally indefensible. Population policy should be aimed primarily at eradicating the cause of excessive population growth. It is in the area of childbearing that national laws relating to family and personal status, welfare, employment, education and taxes may be expected to operate.

Malaysia is composed of several heterogenous communities, the three main ones being Malay, Chinese and Indian. The Malays, united by language and religion, originated from different parts of Malaya, Sumatra, Java and other islands

^{*} Contributed by Ahmad Ibrahim, University of Malaya. Currently at the International Islamic University, Kuala Lumpur.

of the Malay archipelago. The Chinese are mainly from south China, and they are subdivided into different dialect groups: Cantonese, Hokkien, Hakka, Teochew, Hainanese and others. The Indians are mostly from south India and consist mostly of Tamil-, Telegu- or Malayalamspeaking groups. There are also a good number of Gujeratis, Punjabis, Sikhs, Bengalis and others from northern India.

According to the 1980 population census, the ethnic composition for the whole of Malaysia was 58.6 per cent Malay, Pribumi and all other indigenous groups, 32.1 per cent Chinese, 8.6 per cent Indian and 0.7 per cent other.

B. FAMILY PLANNING SERVICES

Prior to the Second World War, very limited family planning advice was offered by individual doctors. After the War and until 1953, family planning activity was again confined to individual doctors and nurses in conjunction with their routine duties in hospitals, health centres or The first organized family private practice. planning activity began in July 1953 and led to the formation of the Family Planning Associations (FPAs) of Johore in 1954, Perak in 1956 and Malacca in 1957. In 1958 these four associations formed the Federation of Family Planning Associations (FFPA) as a representative and co-ordinating body to encourage the formation of associations in other states, a task that was accomplished by 1962.

Owing to limited resources, the FPAs concentrated their activities in larger towns, although some efforts were made to develop programmes on the estates and in rural areas. Still, the result of the activities of the Family Planning Associations was a radical change in the general and official attitude towards family planning, and by 1964 the subject was openly discussed. From 1967 onwards, FFPA made strenuous efforts to enlist the large scale-support required to develop family planning services in Malaysia.

By the mid-1960s the Government had decided to adopt a national family planning programme as a government policy, and made it an integral part of the First Malaysia Plan for the period 1966-1970. The primary consideration was to reduce the rate of population growth. The Population and Family Development Act 1966¹ established a National Family Planning Board² responsible for the national family planning programme.

By the end of 1971, the National Family Planning Board had 77 main clinics and 415 stations throughout Peninsular Malaysia. The Family Planning Associations had 31 main clinics and 155 satellite stations in rubber estates. In addition, 105 private doctors and 216 rubber estates (where the company doctor and the company co-operate) are participating in the national programme. Integration of the family planning programme into rural health-service network in Malaysia was initiated in February 1971 jointly by the Minister of Health and the National Family Planning Board.

Extensive use has been and is being made of para-medical personnel in Malaysia for motivational purposes and for the supply of contraceptive commodities to the general public. The use of traditional birth attendants (Kampong Bidans) may be mentioned here, as their role in the family planning programme is rather unique in this part of the region. The Kampong Bidan is influential in recruiting new acceptors in her area, which is usually inaccessible to the National Family Planning Board and other servicing agencies.

C. LAWS DIRECTLY AFFECTING FERTILITY

1. Use, manufacture, sale and advertisement of contraceptives

There is no direct provision dealing exclusively with the manufacture, sale or use of various contraceptive devices or for the dissemination of birth control information. Nevertheless, a number of laws in Malaysia have a bearing on these matters. The import of goods is subject to customs, and as most contraceptive devices in use at present are imported, their import is subject to control and to the payment of duty.

¹ The Population and Family Development Act 1966 was formerly known as The Family Planning Act 1966.

 $^{^2}$ Now known as the National Population and Family Development Board.

The Medicines (Advertisement and Sale) Act. 1956, (Revised 1983)³ provides, in effect, that no person shall take part in the publication of any advertisement referring to any articles or articles of any description, in terms which are calculated to lead to the use of that article or articles of that description as a medicine for the purpose of practising contraception among human beings. Similarly, it is provided that no person shall take part in the publication of any advertisement referring to any article or articles of any description, in terms which are calculated to lead to the use of that article or articles of that description for procuring the miscarriage of women.⁴ It is a defense in proceedings for the contravention of these provisions to show that the advertisement was published only in a publication of a technical character intended for circulation mainly amongst medical and other authorized personnel.

Sales of chemical devices (including pills and chemical contráceptives) are subject to sections 274, 275 and 276 of the Penal Code prohibiting respectively, the adulteration of drugs, sale of adulterated drugs and sale of a drug as a different drug or as a preparation. In the Sale of Food and Drugs Ordinance, 1952 (No. 28/1952), "drug" is defined as any substance or mixture of substances used by man as a medicine, whether internally or externally, and including anaesthetics.⁵

Insofar as chemical devices for birth control come within the definition of "dangerous drugs", they are subject to the provisions of the Dangerous Drugs Act, 1952⁶ (Revised 1980). Such drugs may only be imported under the authorization of the Minister of Health, and they may be administered only under the direction of a registered medicinal practitioner. The Minister may also make regulations to control the manufacture, possession and distribution of such drugs.

Chemical devices such as pills may also come within the definition of "poison" depending on

their chemical compound, and they would then be regulated by the Poison Ordinance, 1952.⁷ Hormones, androgenic, oestrogenic and progestational have been put under group C in the schedule to the Poison Ordinance, 1952. This means in effect that they cannot be sold or supplied by retailer to any person except under a prescription or as a dispensed medicine or an ingredient in a dispensed medicine supplied by a registered medical practitioner or a licensed pharmacist. Particulars of the sale, including the name of the person to whom it is sold or supplied, must be kept.⁸

Methods of contraception commonly used in Malaysia are the pill, sterilization operations, IUD, condoms and other methods, in that order.

Condoms are sold in drug stores and are available from many street-side stalls. Most of the contraceptives in use in Malaysia are imported, but condoms are manufactured locally. The manufacture and sale of condoms is subject to compliance with standards set by the Standards Act, 1966.

There have been some questions on the legality or desirability of family planning, especially among Muslims in Malaysia. There is no clear ruling in Islam for or against family planning. Some indirect support for family planning may be from the verse of the Koran which states. "the mother shall give suck to their offspring for two whole years", and from the traditions of the Prophet in this matter, which may be interpreted to mean that if another pregnancy during a child's first two years would impair the health of the child or the mother, then it should be avoided. Some of the companions of the Prophet practiced coitus interruptus, and the Prophet did not expressly forbid it. There is therefore a difference in opinion among Muslim authorities as to the legality of family planning and birth control.⁹

In Malaysia, no clear ruling has yet been given at the national level, although in the late 1970s the Prime Minister stated that the family planning programme of the Government is not contrary to Islam. He said, "The real aim of family

³ The Medicines (Advertisement and Sale) Act 1956 (Revised 1983) amended the Medicines (Advertisement and Sale) Act 1956.

⁴ Refers to the Medicines (Advertisement and Sale) Act 1956, section 4.

⁵ Refers to section 11 of The Sale of Food and Drugs Ordinance 1952.

⁶ The Dangerous Drugs Act 1952 (Act 234, Revised 1980) amended the Dangerous Drugs Ordinance 1952.

⁷ The Poison (Amendment) Act 1980 amended the Poison Ordinance 1952.

⁸ Refers to Poison List Order 1970 (P.U.A. 459/70).

⁹ See "Islam and Family Planning", Proceedings of the International Islamic Conference (Beirut, Rebate, 1971).

planning is to plan births according to the means of the family concerned to ensure healthy children. I would like to stress that family planning is being practised voluntarily and it is up to the parents to decide on the number of children they want".

2. Abortion

Abortion is regulated under chapter XVI of the Penal Code concerning offences affecting the human body. Sections 312-316 deal with the causes of miscarriage or injuries to unborn children. Sections 312-316 are as follows:

(a) Causing miscarriage (section 312): Whoever voluntarily causes a women with child to abort, shall, if such miscarriage be not caused in good faith for the purpose of saving the life of the woman, be punished with imprisonment for a term which may extend to three years, or with fine, or with both; and, if the women be quick with child, shall be punished with imprisonment for a term which may extend to seven years, and shall also be liable to fine. Explanation: A woman who causes herself to abort is within the meaning of this section;

(b) Causing miscarriage without woman's consent (section 313): Whoever commits the offense defined in section 312, without the consent of the woman, whether the woman is quick with child or not, shall be punished with imprisonment for a term which may extend to twenty years, and shall also be liable to fine;

(c) Death caused by act with infant to cause miscarriage (section 314): Whoever, with intent to cause the miscarriage of a woman with child, does any act which causes the death of such woman, shall be punished with imprisonment for a term which may extend to ten years, and shall also be liable to fine; and if the act is done without the consent of the woman, shall be punished with imprisonment for a term which may extend to twenty years. Explanation: It is not essential to this offense that the offender should know that the act is likely to cause death;

(d) Act done with intent to prevent childbearing born alive or to cause it to die after birth (section 315): Whoever before the birth of any child does any act with the intention of thereby preventing that child from being born alive or causing it to die after its birth, and does by such act prevent that child from being born alive, or causes it to die after its birth, shall if such act be not caused in good faith for the purpose of saving the life of the mother, be punished with imprisonment for a term which may extended to ten years, or with fine, or with both;

(e) Causing death of unborn child by act amounting to culpable homicide (section 316): Whoever does any act under such circumstances, that if he thereby caused death, he would be guilty of culpable homicide, and does by such act cause the death of a quick unborn child, shall be punished with imprisonment for a term which may extend to ten years, and shall also be liable to fine.

Criminal law in Malaysia therefore permits induced abortions on extremely limited grounds. Pregnancy can only be terminated for the "purpose of saving the life of the mother". The British case R. v. Bourne (1939) can be relied on to give a broad definition to these words. In that case, it appeared that a girl under the age of fifteen, had been raped with great violence by a man who was in due course convicted of the crime. In consequence of the rape, the girl became pregnant. Her case was brought to the attention of the defendant. who was an obstetrical surgeon at St. Mary's Hospital, London. After examination, the defendant openly performed the operation of abortion with the consent of the parents. He was charged under the Offenses against the Persons Act, 1861. In the course of his summing up to the jury, Macnagten pointed out that the words "for preserving the life of the mother" ought to be interpreted in a reasonable manner. It is not contended that these words mean merely for the purpose of saving the mother from instant death. There are cases where it is reasonably certain that a pregnant woman will not be able to deliver the child which is in her womb and survive. In such cases, where the doctor anticipates, basing his opinion upon the experience of the profession, that the child cannot be delivered without the death of the mother, it is obvious that the sooner the operation is performed, the better.

In Islamic religion and law, the killing of a soul is forbidden. Abortion in the sense of destroying a baby, after the creation of the soul, that is when the foetus has acquired a life of its own, is therefore forbidden. Most Muslim jurists agree that the soul has not yet been created when the embryo has not yet taken human shape. This is usually four months (120 days) after conception.

After the fourth month, there is no disagreement among jurists as regards the prohibition of A penalty is imposed on whomever abortion. causes the abortion (even though they may be the father), since it is then considered a crime of The verse of the Koran is relied on. murder. "Nor take life in which God has made sacred except for just cause". The last part of this verse implies an exception for cases where taking a human life might be the lesser of two harms. Thus, where pregnancy presents a danger or threat to the mother's life (as certified by specialists), jurists have ruled in favour of abortion. In other words, the life of the child not yet born is to be sacrificed (lesser harm) in order to save the mother's life. Currently, in Malaysia, abortions can only be carried out by qualified obstetricians and gynecologists when demand is justified for medical and other reasons.

3. Sterilization

The legal status of sterilization under criminal law in Malaysia is ambiguous. It has been argued that sterilization comes under the definition of "grievous hurt" in the Penal Code and that, except for therapeutic sterilization, it is punishable under the Code. Section 320 of the Penal Code designates as "grievous hurt", emasculation and privation of any member. "Emasculation" has not been judicially defined but according to Ratanlal *Law of Crimes*, the term means "depriving a person of masculine vigour, castration. Injury to the scrotum which would render a man impotent".

It is doubtful whether the term "emasculation" covers, or was meant to cover, modern methods of sterilization, which do not affect sexual capability. If sterilization is held to cause "grievous hurt", then consent would not be a defence under section 87 of the Penal Code although it would be a defence under section 88 of the Penal Code if it is "for the benefit" of a There can be no question that if the person. reason for the sterilization operation is therapeutic, it would be protected by this latter section. Contraceptive or socio-economic sterilization would also not be considered "emasculation".

Under Islamic law, permanent sterilization is forbidden, except in case of hereditary disease or deformities that might be transmitted to offspring. Here, jurists have ruled in favour of sterilization as well as separation or divorce to prevent the spread of disease in a community.

Contraceptive sterilization has undoubtedly become an important method in family planning programmes throughout the world. In Malaysia, contraceptive sterilizations are being carried out by doctors working either in the Ministry of Health, the National Family Planning Board or in private practices. Female sterilization is done on medical indications and for those who feel that their family has reached its optimum size, whilst vasectomy is performed as part of family planning services. Sterilization is done not only on therapeutic indications but also on socio-economic grounds.

Because more people have recently requested sterilization, it has been necessary to clarify its legal aspects. According to a circular of the Ministry of Health,¹⁰ the position is as follows:

> The only circumstances in which an operation to sterilize a person can be lawfully performed are those in which the operator honestly believes upon reasonable grounds that an operation is necessary to preserve the life of, or to avert serious injury to, the physical or mental health of the patient. Whatever the steps a doctor may take, they should be within the law, he should never omit:

(1) to make sure that such danger to life or health as described above exists;

(2) to obtain in all cases, a second opinion where possible;

(3) to make quite plain to the patient the nature of the results of the operations; and

(4) to make sure that the patient's consent in writing is freely and fully given without being influenced by others.

¹⁰ Reference No. MH Cont. 401/7 of 25 July 1959.

If these principles are properly applied, it would appear that both surgeons and patients should be safe from suggestions of infringement of either the criminal or civil law. If, however, the operation is unlawfully, then it may well be that the surgeon will render himself liable to a criminal charge and possibly the patient, in certain circumstances, to divorce proceedings.

It would thus be illegal to sterilize a male patient for the sole reason that he and his wife do not wish to have any more children.

The circumstances in which the causing of hurt as defined in section 319, whether grievous or not, would not be an offense when cause in good faith for the benefit of a person without his consent are set out in section 92 of the Penal Code. Under this section, where an operation to sterilize a person is believed by the operator to be necessary to preserve the life, or to avert serious injury to, the physical or mental health of the patient, it would not be considered an offence.

D. LAWS INDIRECTLY AFFECTING POPULATION

This section briefly examines some of the laws which may have a bearing on the control of population growth in Malaysia. The focus is confined to (a) provisions of existing statutes and the scope of common law that have a bearing on population growth; and (b) suggested adjustments of the statutory provisions to curb excessive population growth.

1. Marriage law

Marriage law may make provisions for the acceptance of the principle of monogamy. It can also introduce provisions requiring the parties entering into matrimony to be of sufficient age, thereby regulating the age at which childbearing begins. Marriages can be validly performed in Malaysia under customary, statutory or Islamic law. In the case of customary law, the perculiarities of religious opinion, custom and rites as practised by Malaysians are recognized.

(a) Cutomary law

Customary law marriages as practised by Malaysians of Chinese descent are primarily polygynous, and the court recognizes such unions for purposes of succession and legitimacy. Furthermore, the only legal requirement is that the marriage must be consensual. Proof of the performance of any ceremony is not essential to the validity of such customary marriage, but compliance with the ceremonial part of the marriage has its evidential value. There is no specific guidance on such matters as minimum age, consent of parents or guardians, the prohibited degree of kinship and affinity, nor is there any legal requirement that customary marriage should be registered.

Customary law marriages in accordance with Hindu law and customs are practised by Malaysians of Indian descent. The court appears to have accepted the polygynous character of some Indian Hindu marriages, although in the case of some Hindu groups, monogamy has been accepted as the customary rule. Thus, it has been held in *Paramasuari v. Ayadurai* (1959) that among Ceylon Tamil Hindus, marriage under the custom is monogamous.

In Sarawak, the Chinese Marriages Ordinance makes it compulsory for all Chinese marriages to be registered. It further provides that no marriage shall be registered until it is certain that the ceremonies required by established Chinese law or custom have been duly performed and that the marriage is valid according to such law or custom. It also declares illegal and prohibits registration if the female is under the age of 15 years at marriage.

The facilities for marriages under customary law as stated above are somewhat ill-defined. In this respect, and in terms of its polygynous nature, customary marriage law does not contribute much to population control. However, as noted below, customary law marriages are subject to certain statutory restrictions.

(b) Statute law

Statute law relating to marriage may be conveniently classified as follows:

(a) The Registration of Marriages Ordinance 1952;

(b) The Civil Marriage Ordinance 1952;

- (c) The Christian Marriage Ordinance 1956;
- (d) The Marriage Ordinance, 1959 of Sabah.

The Registration of Marriage Ordinance 1952 provides solely for the registration of all marriages solemnized or contracted within the Federation (and even outside the Federation) other than a marriage to which one of the parties thereof professed at the time of such marriage the Christian or the Muslim religion. This Ordinance does not prescribe the form of marriage nor does it lay down any prescribed essentials for marriages to be registered under this Ordinance. The main objective of this Ordinance is that it enables customary marriages to be registered at the option of the parties. It will be seen therefore that registration of marriages under this Ordinance is purely for statistical and evidential purpose. Neither the registration nor omission to register any marriage under the Ordinance will affect its validity in the eyes of the law.

The Civil Marriage Ordinance 1952 promotes the principle of monogamy, and thereby allows persons other than Muslims to contract if they so desire, monogamous civil marriages, whatever their religious faith or custom. Furthermore, the Ordinance stipulates that the minimum age of the male party to a marriage shall be 16 years and for the female 14 years. There are in the Ordinance, detailed provisions concerning the requirement of parental consent and the prohibition of marriage between persons who come within the prohibited degrees of kinship and affinity. This Ordinance encourages monogamous marriage and also sets out the minimum ages of parties to a marriage contract.

The provisions of the Christian Marriage Ordinance 1956 facilitate the marriages of Christians. Provisions in the 1956 Ordinance relating to monogamous unions and other essentials of a valid marriage are substantially the same as those in the Civil Marriage Ordinance 1952. Notwithstanding that marriages under the Christian Marriage Ordinance are monogamous, it has been held that there is nothing in the Ordinance to prevent a Chinese Christian from opting either to contract a monogamous marriage under the Christian Marriage Ordinance or a polygamous marriage in accordance with personal law [Re Loh Toh Met (1961) and Re Ding Co Ca (1966)].

The Marriage Ordinance, 1959 of Sabah provides for the compulsory registration of all marriages in Sabah. It also declares void any marriage where the male party is below the age of 16 years or the female party is below the age of 14 years.

Under the Law Reform (Marriage and Divorce) (Amendment) Act, 1980,¹¹ The Civil Marriage Ordinance 1952, The Christian Marriage Ordinance 1952 and The Marriage Ordinance 1959 of Sabah have been repealed. The Registration of Marriages Ordinance 1952 has been repealed in so far as it applies to persons whose marriages are registrable under the Act.

(c) Muslim law

Under Muslim law, marriages are polygynous, in that a man is permitted under certain conditions to have as many as four wives at the same time. If the husband chooses to have more than one wife, he is required to give each wife equal treatment. A Muslim woman under the Shafii law followed in Malaysia, cannot give herself away in marriage; her male relatives are required to give this consent.

2. Divorce law

The position of a woman married into a polygynous union according to customary law is unenviable, because the husband can take as many wives as he likes and can divorce any of them almost at will. The parties who have contracted a polygynous marriage cannot petition the civil court for divorce, and they are left to such remedies as they can attain under their personal law or custom without, however, any official means of enforce-Owing to the ill-defined aspects of cusment. tomary law marriages, most non-Muslim women in Malaysia were and still are not prepared to accept a marriage under customary law. They generally insist on monogamous marriage under the Civil Marriage Ordinance.

Statutory divorce is provided under the Divorce Ordinance 1952 and the Matrimonial Causes Ordinance of the State of Sarawak which are confined to the awarding of relief only in

¹¹ Refers to section 23(2) of the Law Reform (Marriage and Divorce) (Amendment) Act 1980.

respect of monogamous marriage. In addition, the laws require proof of domicile or residence of parties to the petition of divorce, before the respective courts will entertain the petition.

3. Law Reform (Marriage and Divorce) Act, 1976

A Royal Commission on Non-Muslim Marriage and Divorce Laws was appointed by His Majesty the Yang di Pertuan Agong in February 1970 to study and examine the existing laws relating to marriage and divorce (other than Muslim marriage) and to determine the feasibility of reform, if considered necessary, in the light of the resolution of the United Nations Convention on consent to marriage, minimum age for marriage, and registration of marriages. This Commission proposed a radical reform in the laws on marriage and divorce, notably eliminating polygynous marriages among the non-Muslim population. The main recommendations were that:

(a) All marriages should be monogamous;

(b) Registration of all marriages should be compulsory;

(c) The minimum ages of the parties to a marriage should be increased to 18 years (although exceptionally a girl over 16 years of age might be granted permission to marry); a person under age 21 years would need parents' or guardian's consent before marriage.¹²

Based on these recommendations, the Law Reform (Marriage and Divorce) Act came into force in 1976. Under it, divorce may only be obtained through the court and is no longer valid under customary law. Divorce may be granted where there is proof of the breakdown of the marriage. In addition, a dissolution of marriage may be obtained by mutual consent or when one of the parties embraces the Islamic faith. Children of voidable marriages are deemed to be legitimate and so are children of void marriages (except where the marriage is a polygamous one) where one or both of the parties have entered into the marriage in good faith. Provision is made for conciliation and reconciliation and for maintenance of spouses and children and for the custody of children.

A bill to amend the administration of Muslim law enactments in Malaysia has been drafted but awaits the approval of the Conference of Rulers, as Muslim law in Malaysia is a state responsibility and comes within the powers of the Malay rulers. The bill seeks to establish a minimum age of marriage and to control polygynous marriage and divorce.

E. LAWS RELATING TO EDUCATION

The Education Act 1961¹³ states, "the educational policy of the Federation . . . is to establish a national system of education which will satisfy the needs of the nation and promote its cultural, social, economic and political development". To achieve this aim, the First and Second Malaysian Plans provided *inter alia* that the quality of education, particularly in the fields of science and technology should be improved and also that educational opportunities should be spread more evenly throughout the country.

The main points of the educational system are:

(a) Education is not compulsory, but a high percentage of the population of children of school-going age attend schools. (Over 90 per cent of the total population of children 6-12 years attend primary schools);

(b) Free education is available to children attending primary school, and children start attending schools at the age of 6 or above;

(c) There is automatic promotion until form III in secondary school (that is, a full nine years of education) when pupils must sit for an examination to quality for a certificate of education (lower grade). Those who fail to qualify cannot continue;

(d) The education system tends emphasize academic achievement, although practical subjects like agricultural science, home science, industrial art and commerce are taught in the lower secondary stage.

¹² The Law Reform (Marriage and Divorce) (Amendment) Act 1980 amended the Law Reform (Marriage and Divorce) Act 1976.

¹³ Education (Amendment) Act 1974 amended The Education Act 1961.

F. LAWS RELATING TO EMPLOYMENT OF WOMEN AND CHILDREN

Laws relating to employment of women have been discussed in depth in chapter IX. Hence, in this section, the discussion will focus on the employment of children and young people.

The Children and Young Persons (Employment) Act 1966 lays down stringent rules governing the employment of a child who has not completed his or her fourteenth birthday or a young person who is below 16 years of age. A child may only be employed to do light work suitable to his or her capacity in any undertaking carried on by his or her family, or any public entertainment where a special licence has been obtained under the Act. The Act also allows a child to be engaged in certain employment approved by the Government and carried on in any school, training institution or training vessel, or where the employment is in respect of apprenticeship training approved by the Commissioner of Labour. Young persons above the age of 14 but below 16 may be employed in wider fields, such as industrial undertakings suitable to their capacity, whether or not the undertaking is carried on by their family. The employment of female young persons however, is prohibited in places such as bars, restaurants, hotels, and boarding houses, unless the establishments are under the management of such females' parents or guardians, or where special permission has been obtained from the Commissioner of Labour. In any event, the Minister is to prohibit by order the employment of children or young persons if he is satisfied that under the circumstances, the employment of children or young persons is not in their best interest. The Act thus restricts children of school-going age from being unnecessarily compelled to work. Parents and others are therefore prevented from using their children solely as a source of income. Parents have also to acknowledge their responsibilities to their children in ensuring that the children have a proper education and upbringing.

G. SOCIAL SECURITY

Under the Employees Provident Fund Act 1951 (Revised 1982),¹⁴ provision is made for the

payment of a lump sum benefit to persons in employment upon their retirement at the age of 55 years and after, or if departing permanently from Malaysia or upon becoming permanently disabled. Contributions to a provident fund are made by both the employer and the employee at levels relative to the employee's salary, and there are provisions for early withdrawals in certain cases.

In the civil service however, the employee does not contribute to retirement benefits. Rather, a pension based on years of service and the officer's last drawn salary is paid by the Government. Upon retirement, the civil servant has the option of taking a gratuity and a reduced pension or a full pension. Under the Employees Provident Fund (Amendment) Act, 1977 (Act A396), employees of statuatory bodies are required to contribute to provident funds.

The Employees' Social Security (Amendment) Act, 1980^{15} provides certain benefits to employees in case of invalidity and employment injury, including occupational disease, and makes provision for other matters pertaining to these circumstances. The Act provides benefits to relatives who are dependents of the insured person who is deceased¹⁶.

It is compulsory that all employers insure all their workers if they employ more than 5. The benefits under this Act are as follows:

(a) periodic payments to an insured person in case of invalidity;

(b) periodic payments to an insured person suffering from disablement as a result of an employment injury;

(c) periodic payments to such dependents of an insured person who dies as a result of an employment injury;

(d) payments to the eldest surviving member of the family of an insured person who died as a result of an employment injury;

(e) periodic payments to an insured person if and so long as he is severely incapacitated or disabled as to require personal attendance of another person;

¹⁴ The Employees Provident Fund Act 1951 (Revised 1982) amended the Employees Provident Fund Ordinance 1951:

¹⁵ The Employees' Social Security (Amendment) Act 1980 amended the Employees' Social Security Act 1979.

¹⁶ Refers to section 2(3) of the Employees' Social Security (Amendment) Act 1980.

(f) medical treatment for and attendance to the insured person suffering from disablement as a result of an employment injury.¹⁷

Invalidity pension shall also be payable throughout the period of invalidity, that is where by reason of a specific morbidity condition of per-

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manent nature, an insured person is incapable of engaging in any substantially gainful activity calculated at 40 per cent of the average monthly wage.¹⁸ The insured is also entitled to disablement benefit for the period of diasablement whether the disablement is permanent or temporary and whether partial or total.

¹⁷ Refers to section 15(1) of the Employees' Social Security (Amendment) Act 1980.

¹⁸ Refers to section 16(2) of the Employees' Social Security (Amendment) Act 1980.

Annex I

SOURCES OF DEMOGRAPHIC DATA*

A. POPULATION CENSUS

1. Brief History of census-taking

Statistical documentation in the form of population censuses has been conducted at regular intervals since the late nineteenth century. However prior to 1970, no one census was ever conducted to cover the entire population of Malaysia. This was mainly because of the rapid political changes in Malaysia's past. There is evidence to indicate that censuses were carried out before 1891, however no records of such censuses are available. The first comprehensive census was conducted in 1891. It covered the present states of Penang, Malacca and Singapore (formerly known as the Straits Settlements), and the British Protected States of Selangor, Perak, Pahang and Negri Sembilan. In that same year, Sabah (then known as British North Borneo) was also covered by a census.

The next census, covering the same geographical region, was conducted ten years later in 1901. By then, the Protected States had been renamed the Federated Malay States.

Ten years later in 1911, another census was conducted. This covered the Straits Settlements, the Federated Malay States and the Unfederated Malay States. The Unfederated States consisted of Kedah, Perlis, Kelantan, Trengganu and Johore. These three political regions were later renamed British Malaya. Sabah too conducted a census in 1911. The British Colonial Government conducted censuses for the next two decades allowing an interval of ten years between censuses. Censuses conducted in these two decades covered the entire region of British Malaya and Sabah. Sarawak conducted its first census in 1939.

Plans undertaken for a census in 1941 were halted owing to the outbreak of the Second World

* Contributed by Wong Tat Khoon, Department of Statistics.

War, for the duration of which, Malaya was under Japanese occupation. The census was deferred until 1947, by which time the British had regained control of Malaya. A census was also taken in Sarawak in 1947, while the next census in Sabah was in 1951.

The Federation of Malaya (Peninsular Malaysia) achieved independence on 31 August 1957. In that year, a last population census was undertaken by the British Colonial Government. This census covered only Peninsular Malaysia. Censuses in Sabah and Sarawak were conducted simultaneously in 1960.

In 1963, the Federation of Malaya was formed, comprising Peninsular Malaysia, Sabah, Sarawak and Singapore. However, in 1965 Singapore formed its own republic. The following census taken in 1970 was the first census taken in independent Malaysia and the first on a pan-Malaysian scale.

In June and July 1980 Malaysia conducted its second population census. Table 1 shows the chronological order of censuses in Malaysia.

2. Legal provisions for census-taking

Census-taking in Malaysia has its legal basis in census legislation. The earliest piece of census legislation was promulgated by the British Colonial Government in 1881 for census-taking in the Straits Settlements. This Ordinance continued to operate with minor amendments up to the census in 1931. In the other states of Peninsular Malaysia, different pieces of legislation were enforced because of political differences. For the remaining states with no legislation for census-taking, the order of the ruler was sufficient.

Until 1931, there was no common legislation for census-taking to cover all the states of what is now Peninsular Malaysia. Several ordinances and enactments operated separately for the various

Year of census	Exact date of census		Total population enumerated							
		Geographical coverage	Straits Settlements	Federated Malay States	Unfederated Malay States	Total Peninsular Malaysia	Sabah	Sarawak		
1891	5 Apr. 1891	Straits Settlement and Federated Malay States.	324 173	422 142						
1891	18 Feb. 1891	North Borneo					67 062			
1901	1 Mar. 1901	Straits Settlement and Federated Malay States	339 581	682 708						
1901	1 Oct. 1901	North Borneo					104 527			
1911	10 Mar. 1911	Straits Settlement, Feder- ated Malay States, Un- federated Malay States, North Borneo	396 328	1 045 732	886 991	2 339 051	208 183			
1921	24 Apr. 1921	Same as for 1911				2 906 691	263 252			
1931	1 Apr. 1931	British Malaya				3 787 758				
1931	26 Apr. 1931	North Borneo					277 476			
1939		Sarawak						490 585		
1947	24 Sept. 1947	British Malaya				4 908 086				
1947	27 Nov. 1947	Sarawak						546 385		
1951	4 June 1951	North Borneo					334 141			
1957	18 June 1957	Federation of Malaya				6 278 758				
1960	15 June 1960	Sarawak						744 529		
1960	10 Aug. 1960	North Borneo					454 421			
1970	25 Aug. 1970	Federation of Malaysia				8 809 557	653 604	976 269		
1980	11 June 1980	Federation of Malaysia			11	426 600	1 011 000	1 307 600		

 Table 1. Censuses conducted in Malaysia, 1891-1980

Source: Khoo Teik Huat – General Report – 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, Malaysia, 1983). Note: Scope of all censuses was total de facto population. •

states. In 1947, under the Malayan Union Order in Council, a common Census Ordinance was introduced to provide for censuses to cover the whole of the Malayan Union (now Peninsular Malaysia). It was based on this new Ordinance that the 1947 and 1957 censuses were conducted for the whole of the peninsula.

Upon the formation of the Federation of Malaya, a Census Act (Census Act 16 of 1960, Revised 1969) was provided for in the new constitution. This was amended in 1969 to include Sabah and Sarawak, which now formed part of the Federation of Malaya. Prior to this, and before joining the Federation of Malaya, Sabah and Sarawak had their own census legislation.

3. Enumeration procedure

In all the censuses carried out in Peninsular Malaysia, the entire population has been enumerated on a *de facto* basis, i.e. persons were enumerated at the place where they were at the time of the census. The 1970 census enumerated the population on a *de facto* and on a *de jure* basis; however, the emphasis was placed on the *de facto* count. No attempt was made to evaluate the differences between the two, with only statistical data based on the *de facto* count being tabulated. The 1980 census held its enumeration at night in order to reduce population mobility.

The censuses held over the years 1891-1921 were two-staged. The first stage involved the house-listing and numbering process; the second stage was completed within two weeks after census day. A prolonged period of final enumeration increases the possibility of receiving inaccurate information because of memory bias.

The Superintendent of the 1931 census introduced a preliminary enumeration stage, as part of three-stage census operation, so as to improve the shortcomings of the preceding twostage censuses. The first stage comprised houselisting and numbering, as before. The second stage was also carried out and completed before census day. This stage involved enumerators actually recording detailed information onto census schedules for all persons. In the third stage, the enumerator revisited each household on census day and altered the records if there were changes in household composition. This innovation introduced in the 1931 census, proved so successful that the Superintendent, "commended it unreservedly to his successors". The procedure was adopted for the following two censuses in 1947 and 1957. The resulting *de facto* population figures under the three-stage system are reliable if the third stage is conscientiously carried out. In the 1957 census however, there was a feeling that the third stage was not effective. This disappointing outcome moved the Superintendent to make the following comment in the 1957 census report:

> Before the next census, very serious consideration should be given to the possibility of introducing the methods adopted in a good many Western countries . . . [which avoid] the necessity of having both a preliminary and final enumeration. With the existing methods used in Malaya, there can be no doubt that some skipped enumerators the final enumeration, as they already had schedules prepared at the preliminary enumeration and it is all too easy for them to say without actual investigation, that the position at final enumeration was the same as at the preliminary enumeration.

The 1970 and the 1980 censuses reverted to two-stage enumeration following the Superintendent's remarks on the shortcomings of the three-stage system, and in view of the reduction in expenses and time gained by eliminating the third stage.

4. Topics enumerated in the census

The topics covered in the population censuses carried out in Peninsular Malaysia are listed in tables 2 and 3. Since the first recorded census in 1891, there has been an increase in the number of topics covered. The census of 1891 only collected information on six basic topics relating to sex, age, marital status, race, place of birth and occupation. These topics have been retained in each of the subsequent censuses, along with additional topics. Many of the variables analysed under these broad topics have been cross-classified according to "ethnic group". This term was used for the first time under the 1980 census to define persons

Торіс	1970	1957	1947	1931	1921	1911	1901	1891
I. Geographical characteristics								
* Place where found at time								
of census	x	х	х	x	х	x	x	х
* Place of usual residence	x						••	
* Place of birth	х	х	х	х	х	x	x	х
* Duration of residence	х		x ^a					
** Place of previous residence	х							
(Derived topics)								
 * Total population 	х	х	X	x	х	x	х	х
Locality	х	х		Х				
* Urban and rural	х							
II. Personal characteristics								
* Sex	х	х	х	х	х	x	x	x
* Age	x.	х	х	х	х	х	х	х
Date of birth	x ^b	х						
* Relationship to head of								
household	х	х	х					
 Relationship to head of family 								
* Marital status	х	х	х	х	х	х	х	х
** Age at first marriage								
** Duration of marriage	х							
Time married	x							
 * Children born 	х	х	х					
* Children living	х		х					
Children dead	х							
Children born dead	Х							
** Nationality (citizenship)	х	Х						
** Community/race/ethnic								
origin	х	х	x	х	х	х	х	X
* School attendance	х	х						
* Educational attainment	Х							
** Professional or vocational								
education	х							
* Literacy in Malay	х	х	х					
* Literacy in English	х	x	x	x	C			
* Literacy in other languages	X	х	х	x° d	x° d			
Languages spoken	X			X ⁻¹	X"	х		
* Religion	X 			Х	х	х		
minnities	х							
III. Economic characteristics								
** Usual activity	х							
* Type of activity	х	х						
* Employment status	х	x	х					
* Occupation	х	х	х	х	х	х	x	x
* Industry	х	x	х	x ^e	-		. =	

 Table 2. Topics enumerated in the censuses of Peninsular Malaysia, 1891-1970
Торіс	1970	1957	1947	1931	1921	1911	1901	1891
IV. Household characteristics								
Type of household	х							
* Household composition	x	х						
Number of household								
members	х							
V. Housing characteristics								
Type of living quarters Type of building	х							
(construction)	х							
Type of foundation	х							
Material of roof	х							
Material of walls	х							
Condition of living								
quarters	х							
Period of construction	х							
Ownership of living								
quarters	х							
Type of water supply	х							
Type of lighting	х							
Number of rooms	х							
Type of bathing facilities	х							
Type of toilet facilities	х							
Kitchen facilities	х							
Type of cooking fuel used	х							
Tenure of living quarters	х							
Rental	х							
Durable household equipment	х							

Table 2(continued)

Source: Department of Statistics.

^a Year of arrival in Malaya.

 $^{\rm b}$ Date of birth according to the lunar calendar was asked of the Chinese population who could not provide the date of birth according to Western calendar.

^c Literacy in other languages also including Malay.

^d In addition to languages spoken, the ability to speak English was also asked.

^e No question was asked on industry, but this information was derived from answers to the question on occupation.

* Basic topics in the Asian recommendation for the 1970 population census.

** Other recommended topics.

Торіс	1970	1980
For persons		
Place where found at time of census	\checkmark	\checkmark
Sex	\checkmark	\checkmark
Relationship to head of household	\checkmark	\checkmark
Age	\checkmark	\checkmark
Year of birth	\checkmark	
Ethnic group	\checkmark	\checkmark
Religion	\checkmark	\checkmark
Citizenship	\checkmark	\checkmark
Identify card	\checkmark	\checkmark
School attendance	\checkmark	\checkmark
Highest level of schooling	\checkmark	\checkmark
Vocational training	х	\checkmark
Birthplace	\checkmark	\checkmark
Period of residence in present locality	\checkmark	\checkmark
Previous place of residence	\checkmark	\checkmark
Reason for leaving previous residence	x	\checkmark
Disability	х	\checkmark
Type of economic activity (during previous week)	\checkmark	\checkmark
Type of economic activity (during last twelve months)	\checkmark	\checkmark
Employment status	\checkmark	\checkmark
Occupation	\checkmark	\checkmark
Industry	\checkmark	\checkmark
Literacy		
Language		
Marital status		
Age at first marriage	x	V.
Number of times married/first marriage	\checkmark	, V
Number of years married	ý.	x
Number of children living and born alive	Ĵ,	\checkmark
Total topics ^a	26	29
For households:		
Number of persons in household	\checkmark	
Type of occupancy	Ň	v V
Rent	Ň	×
Furnished/unfurnished	Ň	x
Main cooking fuel	× \/	Y
Household equipment	Ň	× ×
Household income	v	v ./
Type of living quarters	~^^^ _/	v v
Total tonics	v 7	V 5
a celle solaran	1	5

Table 3. Topics covered in the population censuses of 1970 and 1980, Malaysia

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. 1 (Kuala Lumpur, Department of Statistics, Malaysia, 1983. Note: $\sqrt{}$

indicates that the item was covered in the census, while x denotes that the item was not included.

^a Not all topics were covered for each individual; some were restricted to persons of a given sex and/or age group.

bounded by common language or dialect, religion and custom.

Questions on literacy were introduced in the census of 1921 and retained in all following censuses. Additional information on literacy in English was included from the 1931 census onwards, and literacy in Malay was included from 1947 onwards.

Questions on fertility, on the relationship of the respondent to the head of household and on employment status, as well as a separate question on industry, were introduced in the 1947 census. Prior to this, there was no separate question on industry, and in the census of 1921 and 1931, information on industry was derived from the response given to the question on occupation.

Questions on type of economic activity were included in the 1957 and 1970 censuses to distinguish between the economically active and the inactive population. However, the definitions used in the two censuses were slightly different.

While the question on the place of birth was asked in all the censuses, the question on the duration of stay in usual residence was only asked in 1947. This was dropped in 1957 but was reintroduced in 1970. The question on place of previous residence were introduced in 1970 and was retained in the 1980 census.

5. Processing and tabulation of data

The processing and compilation of data of the earliest censuses up to the census in 1931 were performed manually using the slip system. This process involved the use of slips of cards on which was recorded the personal particulars of each person enumerated. The cards were then sorted for each of the required characteristics. This system was time-consuming and limited in use. However, as mechanical tabulators were not available in the country during those censuses, this method was used.

Mechanical tabulators were first used in the processing of the 1947 census. Processing was carried out in the United Kingdom because mechanical tabulators were unavailable in Peninsular Malaysia, although results were coded locally.

By 1957, the Department of Statistics had acquired mechanical tabulators for compiling the

various data. The same tabulators were used for the processing the 1957 data. However, additional staff and punch-card machines were acquired to cope with the additional work-load.

By 1970, the Department of Statistics had switched to the use of computers. The computer used to process data of the 1970 census was the ICL 1904A, with a capacity of 64k word core-size. This marked the first time that optical forms (UDT) were used instead of the conventional punch-cards. Most of answers to questions on the census schedule were pre-coded and needed only to be marked in pencil by the enumerator, except for a few items which had to be coded and marked by the office staff before the UDT forms were read into the computer. The main processing was done by using a software package known as FILAN (File In the 1980 census, an automatic Analysis). editing system was employed for some topics whereby an unacceptable (or missing) value of an item was imputed on the basis of known relationships of past data.

6. Published reports

Published reports containing results of the censuses are available for each of the censuses carried out in the country. They vary in scope and character. In the first three censuses, that is in 1891, 1901 and 1911, the census reports were presented in three different volumes, one for each of the political units, that is, the Straits Settlements, the Federated Malay States and the Unfederated Malay States. This was the result of the census being conducted by different superintendents for each of the political units.

In 1921 an innovation was introduced to have the census carried out by one superintendent for all the states in Peninsular Malaysia, and the report was presented in a single volume. Census reports for the 1931 and 1947 census were also each presented in a single volume.

Results of the 1957 census were contained in a total of 14 reports. Report 1 gave information on the population according to administrative districts and local authorities; reports 2-12 were reports of each of the eleven states of Peninsular Malaysia; report 13 was the Administrative Report, while report 14 gave data for the whole of Peninsular Malaysia. In the 1970 census, the results were presented in 17 volumes, three of which, tabulated manually, contained compiled data. The three publications were the *Field Count Summary*, Urban Connurbation and Community Groups. The Field Count Summary gave preliminary population data. Urban Connurbation gave data of the population of connurbation areas of each of the state capitals in Peninsular Malaysia except for the state of Perlis, and Community Groups gave data on the various communities of Malaysia.

The following reports contained computertabulated tables. These included thirteen volumes, one volume for each of the thirteen states, including Sabah and Sarawak, and two final volumes for the general report. Of these two, volume I contained a review of the results of the census and volume II contained tables for the whole country.

The 1980 census included 15 volumes, one volume for each state with the exception of Sarawak, which had two volumes. Also included were two final volumes for the general report.

B. HOUSING CENSUS

In may 1980, Malaysia conducted the second census of housing, the first having been held ten years earlier. In both years, the housing census was conducted in conjunction with the population census, being held about one month before the latter. Apart from obtaining information on housing in the country, the census also serves as a listing stage for the population census.

The housing census collected information on the type of living quarters, the number of rooms in the living quarters, the availability of kitchen, basic housing amenities and facilities, the ownership of the living quarters and the level of occupancy. A list of the topics enumerated in the housing censuses is contained in table 4.

C. VITAL STATISTICS

1. Brief history of civil registration system

The civil registration system in Malaysia registers vital events like births, deaths, still-births and marriages.¹ The system of registration was

introduced by the British Colonial Government. The earliest legislation for the registration of births and deaths was introduced in the Straits Settlement in 1878. This enactment provided for the compulsory registration of births and deaths that occurred in the Settlement. The Registrar-General of Births and Deaths was required by the enactment to compile a summary of birth and death statistics yearly.

As British control spread over the Malay peninsula, different enactments were promulgated in the various states to govern the registration of births and deaths. By 1930, some form of legislation, varying slightly in the different states, was enforced to make registration of births and deaths compulsory in all states.

With the establishment of an independent Federation of Malaya on 31 August 1957, a common Ordinance was promulgated to consolidate all enactments of the different states. This new Ordinance, the Registration of Birth and Death Ordinance 61/1957 became effective as from 1 August 1958. The present-day system of birth and death registration operates under The Birth and Death Registration Act 1957 (Revised 1983). This Act includes the provision for the compulsory registration of still-births. Prior to the Birth and Death Ordinance, still-births were reported as deaths, and in some cases were not reported at all. In 1975, the Registration of Birth and Death (Special Provisions) Act was implemented to provide for the registration of incidence of births and deaths among the citizens of Malaysia during their pilgrimage to Mecca.²

The diversity of the ethnic origin and religion of the Malaysian population has made it impossible to have one common law to govern all acts of marriage. Legislation on marriages consisted of three separate ordinance, and acts of marriage could still be contracted outside the scope of these ordinances. This was common among the Muslim population, which had its own religious laws pertaining to marriage. The Chinese and Indian populations also perform marriages according to their own religious and customary rites, and they were often not reported or registered at all. Since there has been no compulsion to do so, the

¹ Discussion on the civil registration system will be focused only on Peninsular Malaysia, as the registration system is somewhat different in Sabah and Sarawak.

² Malaysia, Laws of Malaysia Acts 151-162 (Kuala Lumpur, Government Printer, 1975), vol. VII.

Торіс	1970	1980
Location of living quarters	\checkmark	
Type of living quarters	\checkmark	\checkmark
Type of foundation	\checkmark	x
Construction material of walls	\checkmark	\checkmark
Construction material of roof	\checkmark	\checkmark
Condition	\checkmark	\checkmark
Occupancy status	\sim	\checkmark
Period (year) of construction	\checkmark	\checkmark
Ownership	\checkmark	\checkmark
Ethnic group of owner	x	\checkmark
Water supply	\checkmark	\checkmark
Type of lighting	\checkmark	\checkmark
Toilet facilities	\checkmark	\checkmark
Bathing facilities	\sim	\checkmark
Cooking facilities	\checkmark	\checkmark
Number of rooms	\checkmark	\checkmark
Builder	x	\checkmark
Motor vehicles/scooters	\checkmark	x ^a
Number of persons (occupants)	\checkmark	\checkmark
Number of households	\checkmark	\checkmark
Ethnic group of household head	x	\checkmark

Table 4. Topics covered in the housing censuses of 1970 and 1980, Malaysia

Source: Khoo Teik Huat, General Report - 1980 Population and Housing Census of Malaysia, vol. I (Kuala Lumpur, Department of Statistics, Malaysia, 1983). Notes: $\sqrt{}$ indicates that the item was covered in the census, and x denotes that the item was not included.

^a This item was included in the 1980 population census.

number of marriages reported and registered is believed to be only a small portion of the total.

2. Administrative organization of the registration system

The civil registration system is now under the jurisdiction of the National Registration Department, which comes under the Ministry of Home Affairs. The Registration Department was set up in 1948 as an Emergency Organisation under the Emergency Regulation 1948, to register and issue to each person of 12 years and above, an identity card for the purposes of security checks. This department continues to function at present.³ In 1955, the National Registration Department took over the functions of the registration of births, deaths and marriages because of the similarity in the registration processes. Prior to this, the authority for the registration of births and deaths was vested with the Registrar-General of Births and Deaths under the Health Department.

Under the various ordinances, the Director-General of the National Registration Department also acts as the Registrar-General of Births, Deaths and Marriages. A State Registration Department has been set up in each of the states, headed by a Superintendent Registrar who is responsible to the Registrar-General for the control and supervision of the registration of births, deaths and still-births.

The actual reporting and registration of births, deaths and still-births is done at the registration centres set up in government and private hospitals, local police stations, municipality or city halls, under the charge of a registrar, who is appointed from among the medical officers-incharge of hospitals, officers-in-charge of police stations and health-officers-in-charge of municipality or city halls. In rural areas where there are no hospitals or police stations, registrars are appointed from among the Penghulus (chief leader of village), Ketua Kampong (village headmen), officers-incharge of Orang Asli (natives), headmasters of schools, estate managers or other responsible persons.

The district officer or his delegate acting in his capacity as the Registrar of Marriages is responsible for the solemnizing of civil marriages and the registration of such marriages. The registrar responsible for the conduct and registration of Christian marriages is usually the minister of the church in which the wedding takes place.

3. The registration process

The registration of births, deaths and stillbirths is compulsory under the Birth and Death Registration Act 1957 (Revised 1983). These registrations should be reported and registered at the nearest registration centre. It is the duty of a qualified informant to provide the necessary information on a prescribed form to the Registrar on the occurrence of the event. The Act defines qualified informants for births and still-births as one of the following: the father or mother of the child, the occupier of the house who has knowledge that a child was born in the house, any person present at the birth or having taken charge of the child. The registrar, once satisfied as to the occurrence of the event, will issue a certificate to the informant. For still-births, there is a special provision stating that a written certificate signed by a medical doctor or registered mid-wife who was in attendance during the birth, must be given to the registrar. In cases where no doctor or midwife was in attendance, the informant must make a statutory declaration that a still-birth has occurred.

The Act defines qualified informants for the reporting and registration of deaths as the following persons: a relative present or in attendance during the last illness prior to death; any other relative present at death; any person present at death; the occupier or any inmate of the house, if

³ Registration for an identity card now operates under an amended National Registration Act 1959. This provides that every person in Malaysia upon attaining the age of twelve years must apply to the registration officer for an identity card. Such registration is compulsory and heavy penalties are provided for noncompliance with the law. The identity card is an important document and is required to be produced for all legal, administrative and registration process and also for proof of one's identity.

Records kept for this registration system provides an invaluable source of information on all persons over twelve years of age. However, because of the secrecy and tight security placed on such records, access to them is difficult. However, a demographic study was carried out on these records in 1967/68 to evaluate the population estimates. The study was carried out by the Department of Statistics under the charge of Lee-Jay Cho, a demographer who was assigned to the Department under the auspices of the Ford Foundation. See Malaysia, *Estimates of Population for West Malaysia 1967*, Research Paper No. 1, (Kuala Lumpur, Department of Statistics, 1969).

they knew of the happening of the death; any person finding or taking charge of the body; and the person causing the disposal of the body. In cases when the death has not been attended or certified by medical doctors, the registrar is required to investigate and verify the death before he registers the death and issue to the informant a death certificate.

The time allowed for registration is 14 days for births (including still-births) and 12 hours for deaths (excluding time necessary for the journey and any intervening hours of darkness). Within this period, registration is free and a certificate is issued free of charge to the informant. Delayed registration of birth and deaths are subjected to penalties imposed by the Act, which defines delayed registration as: for births and still-births, after the expiration of 14 days after birth but before 43 days; and for deaths, after the expiration of 12 hours but within the next three succeeding days. Beyond these periods, registration of births and deaths is considered to be late registration and can only be effected with the written authority of the Registrar-General and a statement to the effect being entered in the register.

The registration of birth and death is very important. It provides documentary proof of the occurrence of the event and is a principal source of statistical data on vital events for the social and economic development of the country.

For the registration of marriages other than Muslim marriages, the three ordinances that operate are as follows:

(a) the Civil Marriage Ordinance 1955. This Ordinance covers any person (other than a person of the Muslim religion), who wishes to contract a monogamous marriage. The Ordinance provides that the parties intending to get married must give notice to the registrar of marriage. Notice of the intending marriage will then be displayed at the registrar's office for public viewing for 21 consecutive days, and if no objection is received by the registrar, the intending parties will then present themselves before the registrar to have their marriage certificate is given to each of the parties.

The Ordinance also provides in exceptional cases, the solemnizing of a marriage which dis-

penses with the giving of notice. The Civil Marriage Ordinance 1955 was amended by the Civil Marriage (Amendment) Act 1973. The Amendment does not provide for the appointment of a Deputy Registrar. Only the Registrar-General and the Registrar may solemnize marriages. As a result of this amendment, only the Yang Di-Pertuan Agong (the king) has the power to appoint registrars of marriage.

(b) The Registration of Marriage Ordinance 1955 (reprinted in 1970) was introduced to register any marriage other than Muslim and Christian marriages, which had already been solemnized within or outside the country. The basic requirement under this Ordinance was that the married couple had to apply to the registrar for the registration of the marriage. The registrar, once satisfied that the marriage had been solemnized between the parties according to their religious or customary rites as professed by them, would register the marriage. The registration of such marriages had to be effected within three months after solemnization.

(c) The Christian Marriage Ordinance 1956 (Amendments/1958) covered only persons of the Christian denomination. The solemnization and registration of such marriages was done at the same time by persons appointed by the Registrar-General for such purposes, usually the Minister of the church where the wedding took place.

However, the Law Reform (Marriage and Divorce) Act 1976 was introduced to provide for monogamous marriages and for the solemnization and registration of such marriages and to amend and consolidate the laws relating to divorce. Under the act, the Civil Marriage Ordinance 1952 and the Christian Marriage Ordinance 1956 have been repealed. The Registration of Marriage Ordinance 1955 has been repealed insofar as it applies to persons whose marriages are registrable under the Act.

4. Items recorded on live births, still-births and deaths

Items for the registration of births and deaths recorded on the original register and on the return for statistical reporting are shown in table 5. The table also shows items recommended by the Seminar on Civil Registration and Vital Statistics for Asia and the Far East.

·		Торіс	Priority ^a	Recorded on register	Recorded for statistical report
(a)	Liv	e births			
(-)	(i)	Characteristics of birth or child			
		Name of child		х	
		Attendant at birth	First	_	_
		Date of occurrence	Basic	x	x ^b
		Date of registration	Basic	х	_
		Hospitalization	First	x	
		Legitimacy	Second	_	
		Period of gestation	Second		_
		Place of occurrence	Basic	х	х
		Sex	Basic	x	x
		Type of birth (single or multiple)	First	_	_
		Weight at birth	Second	_	x ^c
	(::)				
	(n)	Characteristics of mother			
		Name	n i	х	-
		Date of birth/age	Basic	X	х
		Duration of marriage	Second	-	х
		Place of usual residence	Basic	x	x
		Order of live birth	First	-	х
		Children living	Second	—	_
		Children born dead	Second	_	_
		Ethnic origin	Second	-	_
		Occupation	First	—	_
		Religion	Second	_	_
		Literacy/educational attainment	Second	-	_
	(iii)	Characteristics of father			
		Name		х	_
		Date of birth/age	Second		-
		Ethnic origin	Second	х	х
		Occupation	First	х	_
		Literacy/educational attainment	Second		
		Religion	Second	_	_
(h)	De	atha			
(U)		Characteristics of event			
	(I)	Cause of death	Basic	v	v
		Cause of death	Basic	x	X
		Date of occurrence	Basic	X	Ĵ.b
		Date of registration	Dasic	X	X
		Place of accurrence	Dasic	X	
	~~~		Dasic	Х	X
	<b>(</b> 11 <b>)</b>	Characteristics of decedent			
		Name		х	-
		Place of residence	Basic	х	X
		Sex	Basic	x	Х
		Age or date of birth	Basic	х	х
		Marital status	First	-	-
		Ethnic origin	Second	x	x
		Occupation	First	x	х
		Duration of residence in usual residence	Second		

### Table 5. Information recorded in respect of vital events, Malaysia

Table 5	(continued)
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	Торіс	Priority ^a	Recorded on register	Recorded for statistical report
	Hospitalization	First		_
	Literacy/educational attainment	Second		
	Religion	Second	-	-
	Place of birth	Second	—	_
(c)	Foetal death			
•	(i) Characteristics of event			
	Cause of foetal death	First	_	
	Certifier or attendant	First	x	_
	Date of occurrence (of foetal delivery)	Basic	x	х
	Date of registration	Basic	х	_
	Hospitalization	First	-	_
	Period of gestation	Basic	_	
	Place of occurrence	Basic	х	х
	Sex	Basic	x	х
	Type of birth (single or multiple)	First	· _	_
	Weight at delivery	Second	_	_
	(ii) Characteristics of mother			
	Name		х	-
	Date of birth or age	Basic	х	х
	Duration of marriage	Second	_	Х
	Place of usual residence	Basic	х	х
	Order of live birth	First	-	х
	Children living	Second	_	_
	Children born dead	Second	—	_
	Ethnic origin	Second	—	_
	Occupation	First	—	-
	Religion	Second		_
	Literacy/educational attainment	Second		
	(iii) Characteristics of father			
	Name		х	_
	Date of birth/age		. —	x
	Ethnic origin	Second	x	x
	Occupation	First	x	
	Literacy/educational attainment	Second		-
	Religion	Second	—	

Source: Department of Statistics.

- Notes: x Recorded in the register or statistical report.
  - Not recorded in the Register or Statistical Report.
  - ^a Priority assigned by the Seminar on Civil Registration and Vital Statistics for Asia and the Far East.
  - b Month and year of occurrence only.
  - c As from 1976 report only.

All the basic items recommended by the Seminar for the registration of births, deaths and still-births are included for statistical reporting, except on date of registration, which is only recorded in the original register.

### 5. Compilation and tabulation of vital statistics

Under the Birth and Death Registration Act 1957 (Revised 1983), there is provision that the Registrar-General must compile a yearly summary of statistics on births, still-births and deaths, and prepare an annual report on the summary. However since 1963, the Department of Statistics has been entrusted with the compilation and publication of vital statistics data. The Registrar-General of Births and Deaths still maintains a separate compilation and report.

The compilation of data by the Department of Statistics is done from copies of the birth and death certificates received from the Superintendent Registrar, which contain more information (for purpose of statistical reporting) than the certificates given to the informant and the register kept by the Registration Department. The compilation of data is done more extensively at the Department of Statistics than at the Registration Department. The report on vital statistics of the Department of Statistics is also more comprehensive than that of the Registrar-General. As each department functions independently, there is duplication of work in the compilation of data. However, this duplication of work is expected to be discontinued, with only the Department of Statistics compiling the data, a copy of which will be sent to the Registrar-General's office for its report.

### **D. SAMPLE SURVEYS**

As noted earlier, population censuses have been conducted in Peninsular Malaysia at almost regular intervals since 1891, and registration of vital events, particularly of births and deaths has been ongoing since 1878. These provide the principal sources of data on the demographic characteristics of the population. In addition, *ad hoc* sample surveys to collect demographic data have also been conducted in the country. These *ad hoc* surveys have mainly collected data on the labour force.

### 1. Labour Force Sample Surveys

The Department of Statistics is currently conducting labour force sample surveys on a regular basis to collect information on the structure and distribution of the labour force. The current series of surveys were initiated in 1971 when an exploratory and pilot survey was carried out. The pilot survey was successful, and subsequently two separate surveys were conducted in April and September of 1972 and 1973. Though the results of the 1972 and 1973 surveys were unpublished, the information was used to monitor the structure of the labour force in the country.

The surveys were continued in 1974 in two rounds, each round covering approximately 18,000 households. From 1975, the labour force surveys were carried out on a quarterly basis, that is, in four rounds, in January, April, July and October. However in 1979, the Labour Force Survey was carried out only in the months of March, June and September. The December round was not carried out because the Field and Sampling Division was involved in preparatory work for the 1980 Population Census.

Prior to the conduct of labour force surveys on a regular basis, other surveys had also been carried out to obtain information on the employment status of the population. The first of those surveys carried out in 1962 by the Department of Statistics in collaboration with the Department of Labour, was the first comprehensive survey of the labour force to obtain information on employment, unemployment and under-employment in Peninsular Malaysia. The survey was carried out in two rounds, in April and September 1962, each round covered approximately 16,500 households in urban areas and 5,250 households in rural areas. Results of the survey were published.⁴

The 1962 survey proved that there was a need to collect data on the employment situation. A follow-up survey on employment, unemployment and under-employment was thus carried out jointly by the Department of Statistics and the Department of Labour. This survey was carried out in two rounds, in June 1964 and June 1965. However, the survey was carried out in five

⁴ Malaya, Report on Employment, Unemployment and Underemployment, 1962 (Kuala Lumpur, Department of Statistics, 1963).

metropolitan areas in Peninsular Malaysia, namely Kuala Lumpur, Petaling Jaya, George Town (city of Penang), Ipoh, Klang and Johore Bahru. Results of this survey were also published in a report.⁵

#### 2. Socio-economic sample surveys

A socio-economic sample survey was carried out by the Department of Statistics in collaboration with the Department of Labour in 1967/68 to collect information on a wide variety of topics. This survey was initially designed to collect information on the employment situation. However, the survey planners found it expedient and economical to collect information on other topics as well. Hence, the survey included collection of data on the employment situation, demographic characteristics such as migration, fertility, population growth rates, and also on household amenities and conveniences.

The Malaysian Socio-economic Sample Survey of Households (MSSH) was launched in

June 1967, and this was the first venture of its kind in Malaysia. Fieldwork was made up of two independent samples, each under the charge of one of the departments involved in the survey. The survey extended over one year from June 1967 to May 1968 and was divided into three sub-rounds, each sub-round covering a period of four months. All in all, about 35,000 households were covered in the survey.

Though MSSH collected information on a wide variety of topics, it is regretable that only information pertaining to the labour force and household amenities and conveniences were published.⁶

⁶ Malaysia, Socio-Economic Sample Survey of Households – Malaysia 1967/68: Employment and Unemployment, vol. 1 (Kuala Lumpur, Department of Statistics, 1970);

Malaysia, Socio-Economic Sample Survey of Households – Malaysia 1967/68: Employment and Unemployment, Zones and Stratas, vol. 2 (Kuala Lumpur, Department of Statistics, 1971);

Malaysia, Socio-Economic Sample Survey of Households – Malaysia, vol. 1 (Kuala Lumpur, Department of Statistics, 1971); and

Malaysia, Socio-Economic Sample Survey of Households – Malaysia 1967/68: Household Amenities and Conveniences, West Malaysia, (Kuala Lumpur, Department of Statistics, 1974).

⁵ Malaya, Report on Employment and Unemployment in Metropolitan Towns, States of Malaya (Kuala Lumpur, Department of Statistics, 1965).

### Annex II

### **EVALUATION OF THE QUALITY OF POPULATION DATA***

#### A. CENSUS DATA

#### 1. Post-enumeration survey

The information obtained in the population censuses is subjected to limitations arising from errors of coverage and content. An attempt to evaluate the quality of census data by using an independent check, was introduced in the 1970 Population Census of Malaysia, through a postenumeration survey (PES). In previous censuses, no attempt had been made to evaluate the quality of the data collected, nor was there an attempt to calculate the extent of under-enumeration. The 1970 PES was limited to Peninsular Malaysia, which contained approximately 84.4 per cent of the total population.

According to the  $PES^1$ , the net undercoverage for persons in all of Peninsular Malaysia was about 4.05 per cent. This meant that about 372,000 persons were not counted in the census.

The Department of Statistics also conducted a post-enumeration survey on the population census of 1980. A detailed analysis of the PES showed that net under-coverage for the population of Peninsular Malaysia was 4.2 per cent. The population of Sarawak had been under-enumerated by 5.5 per cent. The level of under-enumeration for Sabah was unavailable because of technical and operational difficulties, so it was assumed that it was the same as that in Sarawak in order to obtain a consistent set of estimates for the three regions.²

Table 1 shows that the omission of males was more pronounced than the omission of females

for the census of 1970. The table also shows that under-enumeration was more common in urban than in rural areas for all community groups except the Chinese.

The age distribution of the population that was omitted from the 1970 census is presented in table 2. This table shows that omissions were most numerous among young adults, for the mobility of such persons makes it difficult to enumerate Among Malays, omissions them accurately. occurred mainly in the 15 to 25-year age range. Among Chinese, omissions were disproportionally numerous in the ages 20-40, while among Indians, omissions were concentrated in the age groups below 15 years. The age distribution of the population that was omitted from the 1980 census showed that for all ethnic groups, omission were concentrated in the ages 0-29 (table 3).

The differences between the estimates of under-counting among the community groups have very little effect on their respective proportions of the total population. As shown in tables 4 and 5, the shift in the proportions resulting from the adjustment was at most 0.30 per cent for the 1970 census and 0.75 per cent for the 1980 census.

Tables 6 and 7 show comparisons between the adjusted and the unadjusted population by age and community group for 1970 and 1980. The tables show that the effects on percentage distribution are negligible with the exception of the "other" category.

#### 2. Accuracy in age reporting

Errors in census data on age can be caused by the differences in the relative completeness of enumeration of persons in different age groups, and the misstatement of ages of those who are enumerated. Misstatement of age in censuses is often due to digital preference, which causes age heaping.

^{*} Contributed by Shaari bin Abdul Rahman, Department of Statistics.

¹ The PES was launched immediately following the compution of the Census of 1970. It employed a stratified random sample of 1,138 enumeration blocks (EBs) from a universe of 15,594. The sample represented the total population except for unattached males living on military bases. About 1.5 per cent of the total population was included in the sample.

² Koo Teik Huat, Population Census of Malaysia 1980, State Report Sabah (Kuala Lumpur, Department of Statistics, 1983).

Community of 1 and	Percentage of net under-coverage							
Community and sex	Total	Urban areas	Rural areas					
Total								
Per cent	4.0	4.3	3.9					
Number	27 053	8 153	18 898					
Male								
Per cent	4.4	4.7	4.3					
Number	14 927	4 498	10 429					
Female								
Per cent	3.6	3.9	3.5					
Number	12 126	3 657	8 469					
Malay	3,5	4.2	3.4					
Male	3.8	4.7	3.6					
Female	3.2	3.6	3.1					
Chinese	4.7	4.2	5.2					
Male	5.2	4.5	5.9					
Female	4.2	3.9	4.5					
Indian	4.6	4.9	4.4					
Male	5.2	5.5	5.0					
Female	3.9	4.1	3.8					
Other	4.1	5.0	3.5					
Male	3.7	5.5	2.9					
Female	4.4	4.6	4.3					

## Table 1. Percentage distribution of net under-coverage of persons by community group and<br/>sex for urban and rural areas, Peninsular Malaysia, 1970

Source: R. Chander, An Interim Report on The Post Enumeration Survey, 1970 (Kuala Lumpur, Department of Statistics, 1973).

Figure 1 reproduces the results of the 1970 census showing the total population of Peninsular Malaysia by single years of age. The curve is fairly smooth between the ages of 10 and 30, but is less regular for the ages 30 and above. It is interesting to note that there are high concentrations on ages ending in 6 or 1. Also note that the reported numbers at ages ending in 5 or 0 (after age 35) are more than those at ages ending in 4 or 9. Figure 2 shows the results of the 1980 census for the total population of Peninsular Malaysia by sex. For both males and females, there were higher concentrations in ages ending in 0. Reported ages ending in 0 were especially more pronounced than ages ending in 8 or 9. The irregularities of population in ages 0-10 are understandable, as children of these ages are often incompletely enumerated.

Looking at the data according to the different communities individually (figures 3-8) for the 1970 census, concentrations of ages ending in 6 or 1 were confined to the Malay community. This follows the same pattern as that for the total population. These concentrations can be explained by the fact that identity card registration started at the beginning of the Emergency (at the end of 1948).³ Those who reported their ages as ending

³ Malaysia, Estimates of Population for West Malaysia (1967), Research Paper No. 1 (Kuala Lumpur, Department of Statistics, 1969), p. 11.

		Total			Malay			Chinese			Indian			Other	
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0 - 4	13.6	17.0	15.1	13.1	19.1	15.8	12.7	13.4	13.0	17.1	17.5	17.3	25.0	28.6	26.7
5 - 9	11.6	13.6	12.5	13.7	13.0	13.4	8.6	13.0	10.5	11.9	17.1	14.2	_	_	
10 - 14	11.6	12.8	12.1	12.0	12.3	12.1	10.7	11.7	11.1	12.9	16.7	14.6	<u> </u>		
15 - 19	13.9	13.2	13.6	14.3	14.2	14.3	14.7	11.7	13.4	11.5	13.3	12.3	_	_	_
20 - 24	12.4	8.7	10.8	12.2	8.3	10.5	13.0	10.0	11.7	11.5	7.1	9.5	25.0	14.3	20.0
25 - 29	7.0	6.1	6.6	6.7	6.0	6.4	8.1	6.8	7.6	4.5	5.0	4.7	25.0	_	13.3
30 - 34	7.1	3.9	5.7	7.0	3.6	5.5	8.5	4.2	6,7	4.2	3.3	3.8	_	28.5	13.3
35 - 39	3.6	2.5	3.1	2.7	2.1	2.4	4.7	3.2	4.0	4,2	2.5	3.4	-	_	_
40 - 44	2.8	2.1	2.5	2.7	2.9	2.8	2,5	1.5	2.1	3.8	1.3	2.7	_	_	_
45 - 49	2.6	2.5	2.5	2.6	2.5	2.6	2.4	2.1	2.2	2.8	3.3	3.0	_	_	-
50 - 54	2.2	3.1	2.6	2.1	2.9	2.4	1.7	4.0	2.7	3.5	1.7	2.7	_	14.3	6.7
55 - 59	2.4	2.9	2.6	1.3	2.3	1.8	3.6	3.8	3.7	3.1	2.9	3.0	12.5	-	6.7
60 - 64	2.5	2.8	2.6	1.8	2.3	2.0	2.7	3.4	3.0	4.5	2.5	3.6	_	14.3	6.7
65 - 69	1.0	1.4	1.2	0.8	1.1	0.9	1.3	2.3	1.7	1.0	0.8	1.0	_	-	-
70 - 74	0.8	1.8	1.2	0.8	1.8	1.2	0.9	2.5	1.6	0.4	0.4	0.4	_		_
75 +	4.9	5.6	5.3	6.2	5.6	5.9	3.9	6.4	5.0	3.1	4.6	3.8	12.5		6.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

# Table 2. Age distribution of population identified in post-enumeration survey ashaving been omitted from census, Peninsular Malaysia, 1970

(Thousands)

Source: R. Chander, An Interim Report on the Post Enumeration Survey, 1970, (Kuala Lumpur, Department of Statistics, 1973).

		Malay			Chinese			India			Other		_	Total	_
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
0 - 4	14.8	16.1	15.4	11.4	13.1	12.2	13.8	16.4	15.0	9.5	12.5	10.9	13.1	14.7	13.8
5 - 9	8.8	11.3	9.9	9.7	11.6	10.6	8.9	12.5	10.6	18.1	19.8	18.9	9.3	11.7	10.4
10 - 14	7.9	8.3	8.1	11.2	9.6	10.4	9.5	10.3	9.9	8.4	12.8	10.5	9.6	9.3	9.4
15 - 19	14.6	13.9	14.3	12.4	12.5	12.4	12.8	10.8	11.9	7.2	6.6	6.9	13.3	12.7	13.0
20 - 24	17.9	15.1	16.6	12.5	11.9	12.2	12.8	14.6	13.6	10.5	5.8	8.3	14.6	13.5	14.1
25 - 29	10.9	9.8	10.4	9.3	9.0	9.1	10.7	8.6	9.7	8.6	12.1	10.3	10.1	9.3	9.7
30 - 34	6.8	4.3	5.7	8.0	6.8	7.5	5.7	5.3	5.5	11.8	10.1	11.0	7.2	5.7	6.5
35 - 39	4.4	3.0	3.8	5.7	4.8	5.3	3.8	3.2	3.6	59	7.7	6.7	4.9	3.9	4.5
40 - 44	3.4	3.0	3.2	5.5	3.9	4.8	4.2	3.7	3.9	7.3	4.2	5.8	4.5	3.5	4.1
45 - 49	2.3	2.3	2.3	3.5	3.0	3.3	2.7	3.6	3.1	3.6	4.0	3.8	2.9	2.8	2.9
50 - 54	2.7	2.8	2.8	2.5	2.6	2.5	3.3	2.6	29	2.1	0.00	1.1	2.7	2.7	2.7
55 - 59	1.6	2.2	1.9	1.6	2.1	1.9	3.1	2.5	29	3.1	0.00	1.6	1.9	2.2	2.0
60 - 64	1.6	3.0	2.2	1.8	2.7	2.2	3.3	2.2	2.8	0.5	0.00	0.3	1.9	2.7	2.3
65 +	2.3	4.9	3.4	4.9	6.4	5.6	5.4	3.7	4.6	3.4	4.4	3.9	4.0	5.3	4.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 3. Age distribution of population identified in post-enumeration survey as having<br/>been omitted from census, Peninsular Malaysia, 1980

Sources: Khoo Teik Huat, General Report – Population and Housing Census of Malaysia, 1980, vol. 1 (Kuala Lumpur, Department of Statistics, 1983). Department of Statistics, 1985.

Community group	Cens	us	Post-enun survey adj	Percentage point difference	
	Number	Per cent	Number	Per cent	
Total	8 809 557	100.00	9 181 674	100.00	0.00
Malay	4 671 874	53.03	4 841 268	52.73	-0.30
Chinese	3 131 320	35.54	3 285 991	35.79	+0.25
Indian	936 341	10.63	981 449	10.69	+0.06
Other	70 022	0.80	72 966	0.79	-0.01

## Table 4. Effect of post-enumeration survey adjustment on community<br/>group composition, Peninsular Malaysia, 1970

Source: R. Chander, An Interim Report on the Post Enumeration Survey, 1970 (Kuala Lumpur, Department of Statistics, 1977).

## Table 5. Effect of post-enumeration survey adjustment on community group composition, Peninsular Malaysia, 1980

	Cens	us	Post-enum survey adju	Percentage point difference	
Community group	Number (thousands)	Per cent	Number (thousands)	Per cent	
Total	10 944.8	100.00	11 426.6	100.00	0.00
Malay	6 131.6	56.02	6 315.6	55.27	-0.75
Chinese	3 651.2	33.36	3 865.4	33.83	+0.47
Indian	1 093.1	9.99	1 171.1	10.25	+0.26
Other	68.9	0.63	74.5	0.65	+0.025

Source: Khoo Teik Huat, The General Report - 1980 Population and Housing Census of Malaysia, vol. 1 (Kuala Lumpur, Department of Statistics, 1983).

	To	tal	Ma	lay	Chin	nese	Indi	an	Ot	her
Age	Census	PES								
0-4	15.6	15.5	16.5	16.4	14.5	14.4	14.8	14.9	13.7	14.2
5-9	15.4	15.3	15.8	15.7	14.8	14.6	15.7	15.7	12.6	12.1
10 - 14	13.6	13.5	13.5	13.5	13.5	13.4	14.5	14.5	10.3	9.9
15 - 19	11.1	11.2	10.9	11.0	11.3	11.4	11.5	11.5	8.5	8.2
20 - 24	8.5	8.6	8.1	8.2	8.8	9.0	8.5	8.6	10.9	11.2
25 - 29	6.2	6.3	6.1	6.1	6.7	6.7	5.2	5.2	8.8	8.9
30 - 34	6.1	6.1	6.0	6.0	6.2	6.2	5.6	5.5	7.4	7.7
35 - 39	4.8	4.7	4.6	4.6	4.8	4.8	5.2	5.1	6.0	5.8
40 - 44	4.2	4.2	4.5	4.4	3.9	3.8	4.3	4.2	5.4	5.2
45 - 49	3.5	3.5	3.8	3.7	3.0	2.9	4.1	4.0	4.5	4.3
50 - 54	3,1	3.1	3.2	3.2	2.9	2.9	3.6	3.6	3.5	3.7
55 - 59	2.5	2.5	2.2	2.2	2.9	3.0	2.8	2.8	2.7	2.8
60 - 64	2.2	2.2	2.0	2.0	2.6	2.6	2.0	2.1	2.2	2.4
65 - 69	1.4	1.4	1.1	1.1	1.9	1.9	1.2	1.1	1.5	1.4
70 - 74	0.9	0.9	0.9	0.9	1.1	1.1	0.6	0.6	1.0	1.0
75 +	0.9	1.0	0.8	1.0	1.1	1.3	0.4	0.6	1.0	1.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 6. Percentage distribution by age and community of census and post-enumerationsurvey (PES) adjusted population, Peninsular Malaysia, 1970

Source: R. Chander, An Interim Report on the Post Enumeration Survey 1970 (Kuala Lumpur, Department of Statistics, 1973).

	То	tal	Ma	ay	Chinese		India	an	Other	
Age	Census	PES	Census	PES	Census	PES	Census	PES	Census	PES
0-4	13.3	13.4	14.3	14.4	11.9	11.9	12.7	12.9	11.3	13.4
5 - 9	13.3	13.2	13.7	13.6	12.8	12.7	12.6	12.5	12.0	13.1
10 - 14	12.4	12.3	12.6	12.5	12.2	12.1	12.1	12.0	10.0	12.3
15 - 19	11.5	11.5	11.6	11.7	11.0	11.1	12.2	12.2	8.8	11.5
20 - 24	9.6	9.8	9.7	9.9	9.1	9.3	10.9	11.1	8.9	9.8
25 - 29	8.1	8.1	7.8	7.9	8.2	8.3	8.7	8.8	9.0	8.1
30 - 34	6.8	6.7	6.3	6.3	7.5	7.4	6.9	6.9	8.7	6.8
35 - 39	5.1	5.1	4.8	4.8	5.8	5.8	4.4	4.3	6.8	5.1
40 - 44	4.8	4.8	4.7	4.7	5.2	5.1	4.5	4.4	5.6	4.8
45 - 49	3.6	3.6	3.4	3.4	3.9	3.8	3.9	3.8	4.4	3.6
50 - 54	3.2	3.2	3.3	3.2	3.1	3.1	3.1	3.1	4.1	3.2
55 - 59	2.4	2.4	2.5	2.5	2.2	2.2	2.7	2.7	3.3	2.4
60 - 64	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.6	2.1
65 +	3.8	3.8	3.2	3.1	5.0	5.1	3.2	3.1	4,5	3.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 7. Percentage distribution by age and community of census and post-enumerationsurvey adjusted population, Peninsular Malaysia, 1980

Source: Khoo Teik Huat, General Report – 1980 Population and Housing Census of Malaysia, vol. 1 (Kuala Lumpur, Department of Statistics, 1983).

in 0 and 5 (the normal tendency) in 1949, would report their ages as ending in 1 and 6 in 1970, as most people used their identity cards during to verity their date of birth the 1970 enumeration. For the 1980 census, this trend continued for the age groups 50 and above (figure 6). For the lower age groups, the highest concentrations of ages were on digits ending in 0.

For the 1970 census, the Chinese age data seem to be more accurate, as shown by the smoothness of the trend throughout the age range 10-80 (figure 4). For the 1980 census, the age data were more accurate for Chinese, both male and female (figure 7). In the 1970 census, the age curve for Indians was smooth up to the age of 23 (except at the early ages), then it became irregular at the advanced ages. From figure 5, the roundingoff of ages to those ending in 0 can be seen quite clearly for ages 30-80. Also notable is the tendency to report ages in digits ending in 2 or 7, whereas in the 1980 Census (figure 8), for both sexes, the curve became less regular above the age of 30.

Irregularities in age reporting can be measured by carrying out the Myer's test. The percentage deviation of the enumerated population from the expected population in the 1970 census for Peninsular Malaysia is shown in table 8. Except for Malays and Indians, preferences for or avoidances of certain digits were not so apparent. However, the over-all indexes for digital preference are seen to be very low. Table 9 shows the Myer's summary index for the population census of 1980. These summary indexes are lower than those for the 1970 census. This indicates that there was more accurate age reporting in the 1980 census.

Table 10 shows the calculation of Myer's index for Sabah from 1970 census data. It can be observed by looking at the positive deviations at these digits from the table, that there was preference for digits ending in 0, 2, 5 and 7 for both

Figure 1. Total population by single years of age, Peninsular Malaysia, 1970





Figure 2. Total population by sex and single years of age, Peninsular Malaysia, 1980

Source: Department of Statistics, 1985.





Source: 1970 census.

Figure 4. Chinese population by single years of age, Peninsular Malaysia, 1970



Source: 1970 census.

Figure 5. Indian population by single years of age, Peninsular Malaysia, 1970



Source: 1970 census.



Figure 6. Malay population by sex and single years of age, Peninsular Malaysia, 1980



Figure 7. Chinese population by sex and single years of age, Peninsular Malaysia, 1980



Figure 8. Indian population by sex and single years of age, Peninsular Malaysia, 1980

Source: Department of Statistics, 1985.

Last digit of age	M	alay	Chi	inese	Indian		
	Male	Female	Male	Female	Male	Female	
0	0.91	0.89	0.62	0.63	1.60	1.06	
1	1.75	2.30	0.13	0.28	0.30	0.37	
2	0.83	1.37	0.17	0.12	0.45	0.93	
3	-0.57	-1.13	-0.10	-0.13	-0.45	-0.53	
4	-0.86	-1.46	-0.05	-0.17	-0.71	-0.65	
5	-0.42	-0.76	-0.46	-0.58	-0.60	-0.69	
6	1.12	1.47	-0.16	-0.14	-0.06	0.18	
7	-0.10	0.31	-0.01	-0.06	0.32	0.69	
8	-1.26	-1.57	-0.08	_	-0.47	-0.66	
9	-1.40	-1.41	-0.05	-0.16	-0.50	-0.70	
Total deviation	9.22	12.67	1.83	2.27	5.46	6.46	
Summary index	4.61	6.34	0.92	1.14	2.73	3.23	

Table 8. Deviation of per cent from 10.00 of enumerated from expected population<br/>(Myer's test) by community, Peninsular Malaysia, 1970

Source: Calculated from 1970 census data.

Community	Male	Female	Total					
Malay	2.560	3.245	2.853					
Chinese	0.954	1.029	0.987					
Indian	1.928	1.735	1.773					
Other	1.797	1.915	1.692					
Total	1.705	2.250	1.978					

Table 9. Myer's summary index for population census by community, Peninsular Malaysia, 1980

Source: Department of Statistics, 1985.

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Last digit of age	T	otal	Indig	enous	Chinese		
	Male	Female	Male	Female	Male	Female	
0	3.59	3.71	4.23	4.77	1.77	1.23	
1	-1.67	-2.02	-2.43	-2.82	-0.72	-0.27	
2	1.17	1.26	1.51	1.52	0.14	0.19	
3	-1.77	-2.13	-2.57	-2.86	-0.57	-0.63	
4	-1.95	-2.13	-2.55	-2.71	-1.00	-0.79	
5	1.05	1.48	1.72	2.15	-0.19	-0.14	
6	-1.25	-1.35	-1.59	-1.61	-0.28	-0,58	
7	2.09	2.11	3.15 4.12		0.52	0.39	
8	-0.54	-1.82	-0.22	-1.25	0.20	0.44	
9	-0.72	-1.90	-1.24	-1.30	0.17	0.26	
Total deviation	tal deviation 15.80 19.91		21.21	25.11	4,56	4.92	
Summary index	7.90	9.95	10.60	12.55	2.26	2.46	

Table 10.	. Deviation of per cent from 10.00 of enumerated from expected population
	(Myer's test) by community, Sabah, 1970

Source: Calculated from 1970 census data.

	15	280
Race	Male	Female
Pribumi	7.148	6.580
Chinese	2.858	2.998
Indian	5,076	3.547
Other	5.462	7,884
Total	6.326	5.839

### Table 11. Myer's summary index for the population census by community, Sabah, 1980

Source: Department of Statistics, 1985.

males and females. It can also be observed that the deviations for females were larger than those for males, indicating that there were more misstatement of ages among females than among males. Table 11 shows Myer's summary index for the 1980 census for Sabah. There was not much deviation between males and females. The summary indexes were also lower than those for the 1970 census, indicating more accurate age reporting for both sexes.

Table 10 also shows calculations of Myer's indices for the Chinese and the indigenous populations (Murut, Bajau, Kadazan and other indigenous) of Sabah. These calculations show that digital preferences for the indigenous population follow closely those of the total population of Sabah. In the case of Chinese, except for the positive deviations of 1.77 for males and 1.23 for females for ages ending in 0, the preference for or avoidance of particular digits was small.

The calculation of Myer's index for Sarawak from 1970 census data is shown in table 12. Preference among the population of Sarawak for numbers ending in 0 and 5 is shown by the positive deviations at these digits. Another fairly popular It is apparent again that the age digit was 8. reporting among women in Sarawak was not as accurate as that among males. When the summary indexes and the deviation at each digit are compared, the summary index for males was 8.25 and for females was 9.45. Positive deviation for ages ending in 0 was 5.8 for males, as compared to 6.6 Table 13 shows Myer's summary for females. index for the 1980 population census of Sarawak. The summary indices for males and females on the whole were 4.9 and 5.1, respectively. These indices were very much lower than those for the 1970 census.

Table 12 also shows the Myer's indices for Chinese and for the rest of the Sarawak population (including Dayaks, other indigenous, Malays and others). It is apparent that patterns of deviation for populations other than Chinese, followed closely the pattern for the whole population.

Comparison of these indices suggest that age reporting in Peninsular Malaysia was better than in Sabah or Sarawak. Separate calculations of indices for the Chinese population supports the claim that Chinese in general have an accurate knowledge of their age.

### **B. VITAL STATISTICS**

### 1. Peninsular Malaysia

Birth and death registration were instituted in the Straits Settlements at the end of the nineteenth century and in the Federated Malay States in 1920. Registration commenced in other states in the late 1920s. In 1946, vital statistics for all the states of Peninsular Malaysia were published in the same volume.

The Superintendent of the 1931 census, emphasized the unreliability of birth statistics in the less advanced states. These states had only recently introduced registration for the interval 1911-1920. During this period, reported death rates exceeded birth rates, as it was quite likely that births were unrecorded to the extent of at least 25 per cent.

> Birth registration indeed was unpopular as to report a birth, entailed a journey and expense without any clear or immediate compensating advantage. In the more advanced states, birth registration was very far from complete, with the less advanced states suffering from the most underregistration⁴.

After 1947, the quality of mortality and fertility data improved greatly. A number of estimates on the completeness of registration have been published. A check on the under-registration of births by Saw Swee Hock has indicated that for the whole of Peninsular Malaysia, about 10.2 per cent of the births that occurred in the interval 1947-1957 were not registered. The proportion of under-registration among Malay births was 15.3 per cent, as compared to 4.9 per cent for Chinese and a much lower 3.5 per cent for Indian births. The high rate of under-registration of Malay births was associated with low literacy rates, low school attendance and small proportions in urban areas

⁴ C.A. Vlieland, A Report of the 1931 Census and on Certain Problems of Vital Statistics (London, Waterlow and Son, 1932), pp. 206-208.

T , 31 4, 6	T	otal	Chi	inese	Balance of population		
Last digit of age	Male	Female	Male	Female	Male	Female	
0	5.8	6.6	0.9	1.1	8.1	9.1	
1	-1.1	-1.2	-0.4	-0.2	-1.4	-1.7	
2	-1.0	-1.3	-0.1	-0.1	-1.3	-1.8	
3	-1.6	-1.8	-0.5	-0.4	-2.1	-2.4	
4	-1.3	-1.5	-0.3	-0.2	-1.8	-2.0	
5	2.3	2.5	0.3	0.0	3.2	3.5	
6	-0.5	-0.7	-0.6	-0.1	-0.7	-0.8	
7	-1.2	-1.4	0.2	-0.1	-1.8	-2.0	
8	0.1	0.3	0.2	0.2	_	0.3	
9	-1.6	-1.6	-0.3	-0.2	-2.3	-2.2	
Total	16.5	18.9	3.8	2.6	22.6	25.8	
Summary index	8.25	9.45	1.90	1.30	11.30	12.90	

## Table 12. Deviation of per cent from 10.00 of enumerated from expected population(Myer's test) by community, Sarawak, 1970

Source: Calculated from 1970 census data.

Community	Male	Female
Malay	4.308	4.926
Melanau	9.516	9.631
Iban	8.200	8.922
Bidayuh	4.185	4.828
Other indigineous	10.250	10.047
Chinese	1.645	1.133
Indian	5.744	5.687
Other	5.035	4.837
Total	4.871	5.123

### Table 13. Myer's summary index for population census by community, Sarawak, 1980

Source: Department of Statistics, 1985.

and in estates.⁵ Further, male births were more completely registered than female births.

An independent check on the completeness of birth registration was performed by estimating births using the age-specific birth rates from the West Malaysia Family Survey 1966-1967.⁶ The estimates were then compared with the average annual births for the five-year period 1962-1966 and for 1967. Birth registration was found to be approximately 95 per cent complete.⁷

Data from the 1967/68 Socio-economic Sample Survey suggested that only 1.9 per cent of births and 3.3 per cent of deaths were not registered.⁸

Using internal consistency checks, Hirschman demonstrated that for the years 1946-

⁵ Saw Swee Hock, "A note on the under-registration of births in Malaya during the inter-censal period 1947-57", *Population Studies*, vol. 18 (1964), has indicated the following correlation coefficients between under-registration of births for all communities and five selected variables:

(a)	Percentage Literacy in any language	:	0.86
(b)	Percentage more than 3 years schooling	:	0.73
(c)	Percentage at least 1 year schooling	:	0.72
(d)	Percentage of urban population	:	0.66
(e)	Percentage of estate population	:	0.52

⁶ West Malaysia Family Survey 1966-1967 was conducted by the Department of Statistics under the auspicies of the National Family Planning Board.

⁷ L. Cho, J.A. Palmore and L. Saunders "Recent fertility trends in West Malaysia", *Demography*, vol. 5, No. 2, 1968.

⁸ Malaysia, Socio-Economic Sample Survey of Households-Malaysia, vol. I (Kuala Lumpur, Department of Statistics, 1971). 1968, there was very little variation among states, communities, sexes or urban-rural areas with reference to mortality.⁹

### 2. Sabah and Sarawak

Statistics on births and deaths for Sabah and Sarawak are available for the years since 1946 and since 1947, respectively. From 1968, these statistics were published in an annual publication known as *Vital Statistics Sabah/Sarawak*.¹⁰ As in the case of Peninsular Malaysia, the total population of Sabah and Sarawak is covered by the legal requirement to register all births and deaths. However, vital registration data is subject to errors of underregistration since not all vital events occurring in the states are recorded.

Table 14 shows the total number of registered births and deaths and crude birth and death rates for Sabah, Sarawak and Peninsular Malaysia for the years since 1960. Generally it would be expected that the trend was consistent over time for a specific area. While there may be changes from year to year in the number and pattern of births and deaths, there should be no sudden shifts in the numbers or patterns unless there has been a corresponding major change in health conditions,

	F	Peninsular Malaysia				Sab	ah		Sarawak			
Year	Live births	Crude birth rate	Deaths	Crude death rate	Live births	Crude birth rate	Deaths	Crude death rate	Live births	Crude birth rate	Deaths	Crude death rate
1960	282 7 55	40.9	65 636	9.5	16 461	36.2	3 778	8.3	19 655	26.4	4-326	5.8
1965	295 155	36.7	63 769	7.9	19 642	36.5	3 015	5.6	25 879	30.4	4 531	5.3
1970	297 358	33.9	64 035	7.3	24 581	37.9	3 812	5.9	30 228	30,9	5 037	5.2
1975	313 741	31.4	64 360	6.4	30 345	36.9	3 589	4.4	32 966	29.8	5 496	5.0
1980*	347 015	30.3	64 212	5.6	41 223	40.7	4 257	4.2	37 158	28.4	5 435	4.2

 Table 14. Live births, deaths, crude birth rate and crude death rate based on registration,

 Peninsular Malaysia, Sabah and Sarawak, 1960-1980

Sources: Malaysia, Vital Statistics, West Malaysia/Peninsular Malaysia (Kuala Lumpur, Department of Statistics, 1967, 1975, 1980). Malaysia, Vital Statistics, Sabah (Kota Kinabalu, Department of Statistics, 1973, 1977, 1982).

Malaysia, Vital Statistics, Sarawak (Kota Kinabulu, Department of Statistics, 1974, 1978, 1981).

⁹ Malaysia, Evaluation of Mortality Data in the Vital Statistics of West Malaysia, Research Paper No. 5 (Kuala Lumpur, Department of Statistics, 1971).

¹⁰ With the concurrence of the Registrar-General, the Department of Statistics (Sabah/Sarawak) took over the data processing of vital statistics for these two states in 1966.

such as an epidemic or a shortage of food supplies. It can be observed that for the period 1960-1980, birth and death rates for Sabah and Sarawak were generally lower than the rates for Peninsular Malaysia. This is not likely considering that the level of socio-economic development in Sabah and Sarawak is lower than that in Peninsular Malaysia. It can be observed also that CBR and CDR in the states of Sabah and Sarawak have not been consistent over time. This observation suggests that births and deaths in these states are poorly registered.

Despite the law requiring registration of births within 14 days of occurrence and of deaths within 12 hours of occurrence, the number of registered events in a given year is not necessarily the number that occurred in that year. The difference in numbers reported is due to delayed registration.

Table 15 shows the number of live births by year of occurrence and year of registration for 1973-1982 for Sabah. It can be observed that on average only about 90 per cent of births which occurred in a particular year were actually registered in that year, except for the year 1982. The United Nations *Handbook of Vital Statistics*  Methods¹¹ points out that the proportion of delayed registrations is a useful index of the incompleteness of registration during previous time periods. However, this is only a minimum indication, as there might be an unknown number of events which were not registered at all. This could be especially true as the communication system in Sabah is not as good as in Peninsular Malaysia, and more than 80 per cent of the population in this State reside in rural areas. In 1982, however there was fairly complete registration of births.

The Population Division of the United Nations has estimated crude birth rates of 48.0 for both Sabah and Sarawak for the period 1965-1970.¹² These estimates suggest that underregistration occurred as late as 1965-1970: only 77 per cent completeness was achieved in Sabah and 58 per cent was achieved in Sarawak. The Population Division of the United Nations has also estimated a crude death rate of 12.5 and a life expectancy at birth of 55 years for Sabah and Sarawak for the period 1965-1970.

Year of occurrence	Total	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Total	360 203	28 198	29 584	30 942	31 933	33 625	34 857	38 203	41 530	44 567	46 764
Before 1973	4 061	1 525	441	204	338	177	181	123	476	335	261
1973	27 701	26 673	1 000	10	2	1	3	2	2	6	2
1974	29 792		28 143	1 613	5	6	2	2	7	6	8
1975	30 369			29 115	1 229	1	2	2	6	8	6
1976	31 632				30 359	1 250	7		4	8	4
1977	33 617					32 190	1 417	_	1	4	5
1978	35 011						33 245	1 760	2	4	-
1979	38 244							36 3 14	1 917	11	2
1980	41 223								39 115	2 103	5
1981	44 494									42 082	2 412
1982	44 059										44 059

Table 15. Live births by year of occurrence and year of registration, Sabah, 1973-1982

Source: Malaysia, Vital Statistics, Sabah 1982 (Kota Kinabalu, Department of Statistics, 1984).

¹¹ Series F, No. 7 (New York, 1955).

¹² United Nations, Demographic Yearbook, 1971 (New York, 1972).

Poor communication in these states may be a factor that has contributed to the incompleteness of registration. Perhaps, people need to be educated on the usefulness and importance of vital Rapid implementation of the legal rerecords. quirements on registration and the use of registration documents will serve as a motivating force to register vital events. This seems to be necessary in order to achieve complete vital registration. The United Nations Manual II indicates that a rural population thinly dispersed over a wide area may find it physically difficult to reach a registrar's office in order to report a birth. The consequent tendency to neglect registration may be aggravated if means of transportation are deficient, if illiteracy is prevalent, if people see no positive inducement to register births and if births frequently occur at home without a physician in attendance.

The same factors which operate to reduce the completeness of birth registration may also contribute towards incomplete death registration. Among a rural population thinly dispersed over a wide area, there are few doctors available, so that many deaths occur without a physician in attendance and it is comparatively easy to bury the body privately. When the burial has been accompanied by whatever religious and social ceremonies deemed important by the people concerned, they may not feel the need to register the death.¹³

¹³ United Nations, "Methods of appraisal of quality of basic data for population estimates", *Manuals on Methods of Estimating Population*, Manual II (ST/SOA/Series A/23), (New York, 1956), pp. 19-20.

### Annex III

### ALTERNATIVE PATHS OF POPULATION GROWTH 'AND THEIR SOCIO-ECONOMIC IMPLICATIONS*

#### A. ASSUMPTIONS

Six sets of projections have been run based on different assumptions about the future. The first four sets were based on the assumption that total fertility rates (TFR) of 3, 4, 5 and 10 are maintained throughout the projection period. The fifth and sixth projections were based on the assumption that TFR would decline to replacement level (2.1) by the years 2025 and 2055, respectively, and would be maintained thereafter.

### **B. POPULATION, VITAL RATES, URBAN-IZATION AND DEPENDENCY RATIOS**

By the year 2030, the total population for Malaysia will have grown to 32.2 million under the 3-child assumption, 46.2 million under the 4-child assumption, 63.4 million under the 5-child assumption, 200 million under the 10-child assumption, 29.7 million if replacement fertility is reached in the year 2025 and 43.4 million if replacement fertility is reached in the year 2055.

Under^o the first four assumptions, the population will reach 70 million by the year 2095, 2050, 2033 and 2010, respectively. The population will double itself every 57 years (3-child), 31 years (4-child), 23 years (5-child), 12 years (10-child). It is clear from these projections that population growth, if unchecked, will lead to an explosive increase of people and exert great pressure on limited resources.

For purposes of illustration, if the 10-child family were to continue to be the norm, there would be 154 billion Malaysians by the year 2150. This means that each square metre of Malaysian soil, rivers, swamps and mountains would be occupied by one Malaysian by the year 2160.

In contrast, if replacement fertility is reached by the year 2025, the population will cease to grow and will stabilize at about 32 million by the year 2075. If replacement fertility is reached by the year 2055 however, the population will only cease to grow by around the year 2105 and will stabilize at about 68 million.

In terms of vital rates, the 4-child family model will have a crude birth rate that is close to the current one; the 10-child family model will result in the highest crude birth rate (59 per thousand population) ever recorded in human history. (The highest CBR in 1980, of 49 per thousand population, was registered in Afghanistan.) At replacement level, given the mortality conditions in the model life table, CBR and CDR will balance each other at 14 per thousand population to produce a stationary population. The higher crude death rates forecast under the assumptions of low and declining fertility vis-à-vis the high-fertility assumptions, reflect a more mature age structure, as mortality conditions were assumed constant for all these projections.

The proportion of population residing in urban areas will increase from 34 per cent in 1980 to about 45 per cent by the year 2000 and to 85 per cent by the year 2150, assuming that 0.9 per cent of the rural population migrates to urban areas each year.

Under the high-fertility assumptions, a greater part of total dependency will be youth dependency (98 per cent in the 10-child model), while almost half of all dependency will be that of the aged (43 per cent under declining fertility), assuming that all those aged 0-14 and 65 and above are dependents. Clearly, different fertility trends

^{*} Contributed by Teh Nai Peng, National Population and Family Development Board.

and patterns will have different socio-economic implications as well as demands for services.

### C. LABOUR FORCE AND NEW JOB REQUIREMENT PER YEAR

The 1980 census reported that out of the 7,407,900 people aged 15-64, 63.3 per cent were in the labour force. Labour force participation rates for males and females were 84.8 and 42.2 per cent, respectively. Over-all, some 6 per cent of the labour force was unemployed. The unemployment rate was higher in rural areas (6.6 per cent) than in urban areas (5.3 per cent), and higher among females (8.7 per cent) than among males.

According to the Fourth Malaysia Plan, the labour force is estimated to have increased from 3.7 million in 1970 to about 5.4 million in 1980, growing at an average rate of 3.9 per cent per annum. Rapid economic growth during the decade enabled the country to achieve an unprecedented rate of growth in employment of 4.1 per cent per annum, resulting in a net increase over the decade of about 1,697,600 jobs.

The effects of differential fertility on the labour market become prominent only after 20 years or more, as seen in the table. In 50 years, the labour force will range from 12.6 million under the low- or declining-fertility assumptions, to 52 million under the 10-child assumption. However, the labour force will be even larger should the participation rates, particularly among females, improve in the future. In 1980, 175,270 new jobs had to be created so as not to worsen the unemployment situation. By the year 2000, the number of new jobs required will range from 139,000 under the 3-child assumption to 694,600 under the 10-child assumption. More than 3 million jobs will have to be created annually by the year 2030 under the 10-child assumption.

Creation of new jobs is neither easy nor inexpensive. It is estimated that the cost of creating a job in the FELDA land development scheme is about \$M15,000-\$M18,000, and the cost of creating one job in industry is about \$M30,000.

The tasks of planners of job creation schemes are further complicated by the need to cater to sectoral employment growth as the country undergoes rapid modernization and structural change.

### D. PRIMARY AND SECONDARY EDUCATION REQUIREMENTS

Rapid population growth means that there are a large number of children of school-going age. The number of primary school students would increase by almost threefold within 50 years if the current TFR of about 4 were to be maintained. Assuming that TFR gradually declines to replacement level by 2075, the number of primary and secondary school students will double over the interval 1980-2030. However, under the high-fertility assumption, it will take only one decade to double the primary school student population.

As the Government provides free education up to the secondary level, it must commit 17 per cent of the national budget to education. Even if TFR declines by 0.1 point per year, the number of teachers and classrooms must be doubled just to maintain existing standards of education.

In 1980, there were 70,115 primary school teachers and 45,736 secondary school teachers (including some administrative staff), representing teacher-pupil ratios of 1 in 29 and 1 in 23, respectively. The pressure of population on education facilities will become more serious with high fertility. Classrooms are more and more crowded, with sometimes as many as 50 students in each. Most of the schools run both morning and afternoon sessions.

### E. HEALTH FACILITIES (PENINSULAR MALAYSIA)

Undoubtedly, rapid population growth places increasing stress on medical and health facilities. Health services need to be greatly expanded just to maintain current health personnel and services, which are sometimes inadequate. In 1980, the doctor-population ratio was 1 to 3,265. If the target is to achieve a doctor-population ratio of 1 to 1,000, the number of doctors in Peninsular Malaysia must increase to 19,170 by the year 2000 and to 35,720 by the year 2030, even if TFR were to decline by 0.1 percentage point per annum.

Under the 5-child assumption, the number of doctors must be increased to 6,573 in Peninsular Malaysia by the year 2000 and to 15,980 by the year 2030 just to maintain the current doctorpopulation ratio of 1 to 3,265.

Similarly the number of hospital beds has to be increased to cope with the increase in population. In 1980, there were 385 people per hospital bed in Peninsular Malaysia. Just to maintain this standard, the number of beds must increase to 49,792 in the year 2000 and 92,779 in the year 2030 in Peninsular, assuming that TFR declines by 0.1 percentage point per year.

Clearly in order to maintain and improve existing health facilities and services, the Treasury will have to allocate a larger budget than currently to the health sector, which now accounts for about 8 per cent of the total national budget.

### F. HOUSING

It has been estimated that approximately 2 million units will need to be constructed if housing requirements of the population in Peninsular Malaysia are to be met over the years 1970-1990. Of this, more than 55 per cent will be to meet the requirements brought about by population growth, and the remainder will be required to meet replacement needs.

During the decade 1970-1980, a total of 744,000 units were constructed. Of these, the public sector built 207,590 units and the private sector the remaining 536,410 units.

Assuming that the TFR declines by 0.1 per cent per annum, the number of households requiring new housing will increase from 134,030 in 1980 to 205,370 in 2000 and 303,450 in 2030, not to mention the need to replace deteriorating dwellings.

Based on the 5-child and 10-child assumptions, the number of households requiring new housing in the year 2030 will be 570,580 and 1,974,080, respectively. It appears that what has been achieved during the period 1970-1980 in terms of house construction has to be further improved to prevent deterioration of housing. The task of providing adequate housing to all will obviously be a huge one, assuming rapid population growth.

#### G. CONCLUSION

Given the finite amount of habitable space, it would be unreasonable to assume that any population would growing above replacement level for an infinite period of time. Furthermore with modernization countries at various stages of demographic transition experience fertility declines as a result of changing norms and values toward childbearing. Hence the first four projections were meant as illustrative rather than realistic examples.

The last three assumptions, with replacementlevel fertility attained at different times, will probably be closer to actual population growth in the future. However, even under these three assumptions, the size at which the population of Malaysia will stabilize ranges from 32 million if replacement is achieved in the year 2025, to more than 68 million if replacement is achieved in the year 2055. (This latter projection assumes that the 4-child family is maintained up to the year 2010 and then fertility declines to replacement by 2055.) The last projection assumes that fertility will decline by 0.2 percentage points for the first 5 years and 0.1 points for all subsequent 5-year periods until replacement is achieved in 2070. This will yield an ultimate population of 64 million.
Year	Total fertility rate				Replacement level by	Replacement level by	Replacement level by
	3	4	5	10	2025	2055	2070
			Total	population (mil	lions)		
1980	13.75	13.75	13.75	0.01B	13.75	13.75	13.75
1990	16.69	17.90	19.11	0.03B	17.40	17.90	17.68
2000	20.38	23.14	25.91	0.04B	21.12	23.14	22.30
2030	32.17	46.20	63,35	0.2B	29.74	43.37	37.99
2050	40.93	71.62	115.11	0.61B	32.44	56.04	48.14
2100	74.15	215.15	514.57	9.7B	32.77	69.41	62.06
2150	134.12	646.05	2 301.57	154 <b>.4B</b>	31.98	68.04	64.02
				Total births			
1990	407 130	0.54m	0.68m	1.4m	468 200	542 840	508 910
2000	501 560	0.67m	0.85m	1.8m	487 630	673 870	597 610
2030	693 880	1.29m	2.10m	10.1m	476 030	1 005 590	829 840
2050	862 350	2.00m	3.87m	31.9m	475 250	1 009 880	911 730
2100	1 566 800	5.98m	17.2m	507.0m	463 300	989 420	912 950
2150	2 836 430	17.97m	76.98m	8 054.3m	452 100	961 310	931 910
				Crude birth rate			
1990	25.6	32.3	38.4	61.4	28.4	32.3	30.6
2000	25.8	31.0	35.2	48.9	24.1	31.0	28.3
2030	22.3	29.5	35.6	57.0	163	24.2	22.7
2050	21.7	29.4	36.2	59.3	14.8	18.5	19.4
2100	21.8	29.3	36.0	59.5	14.1	14.1	14.8
2150	21.8	29.3	36.0	59.4	14.1	14.1	14.6
			(	Crude death rate	•		
1990	5.7	5.7	5.8	6.0	5.6	5.7	5.7
2000	6.2	6.0	5.7	5.1	6.0	6.0	6.0
2030	8.7	7.1	6.1	4.5	9.0	7.2	7.8
2050	10.0	74	6.1	43	12.0	83	9.2
2100	9.9	74	6.1	44	14.6	13.7	12.9
2150	9.8	7.3	3.0	4.4	14.6	14.6	14.2
			Average and	nual growth rate	e (per cent)		
1000	2.0	27	2.2	5 5	22	27	25
2000	2.0	2.1	2.5	J.J 4 4	2.5	2.7	2.3
2000	2.0	2.5	2.9	4.4 5.2	1.0	2.5	2.2
2050	1.4	2.2	3.0	5.5	0.7	1.7	1.5
2050	1.2	2.2	3.0	5.5	0.3	1.0	1.0
2100	1.2	2.2	3.0	5.5	-0.05	0.06	0.2
2150	1.2	2.2	3.0	5.5	-0.03	-0.03	0.04
		. –	Size of url	ban population	(millions)		
1980	4.7	4.7	4.7	<b>4.</b> 7m	4.7	<b>4.</b> 7	4.7
1990	6.6	7.1	7.6	0.01b	6.9	7.1	7.0
2000	9.1	10.3	11.5	0.02b	9.5	10.3	10.0
2030	18.6	26.5	36.1	0.11b	17.2	24.9	21.9
2050	26.4	45.9	73.4	0.38b	21.0	36.1	31.0
2100	57.35	165.2	392.8	7.26b	25.5	53.7	48.1
2150	114.7	549.0	1 946.1	128.3b	27.5	58.3	54.9

## Table 1. Projected population and implications based on alternative<br/>fertility assumptions, Malaysia, 1980-2150

Year	Total fertility rate				Replacement level by	Replacement level by	Replacement level by
	3	4	5	10	2025	2055	2070
			D	ependency rati	io		
1980	0.76	0.76	0.76	0.76	0.76	0.76	0.76
1990	0.59	0.70	0.82	1.39	0.65	0.70	0.68
2000	0.59	0.73	0.86	1.39	0.59	0.73	0.67
2030	0.60	0.73	0.86	1.44	0.49	0.63	0.60
2050	0.61	0.72	0.84	1.49	0.51	0.51	0.55
2100	0.62	0.72	0.84	1 46	0.56	0.55	0.54
2150	0.62	0.72	0.85	1.46	0.56	0.56	0.56
			Child	d dependency i	ratio		
1980	0.70	0.70	0.70	0.70	0.70	0.70	0.70
1990	0.52	0.63	0.75	1.32	0.59	0.63	0.61
2000	0.51	0.65	0.79	1.33	0.52	0.65	0.60
2030	0.46	0.62	0.78	1.41	0.34	0.53	0.48
2050	0.46	0.62	0.77	1 46	0.32	0.40	0.41
2100	0.46	0.62	0.77	1.10	0.32	0.32	0.33
2150	0.46	0.62	0.77	1.43	0.32	0.32	0.33
			GNP (	billions of 198	0 \$M)		
1980	56.15	56 15	56.15	56.15	56.15	56.15	56.15
1990	87.83	87.78	87 73	87 52	87 79	87.78	87.78
2000	150.65	150.07	149 58	147 90	150.34	150.07	150.18
2030	786.45	766.14	752.30	724.62	793.86	768.10	776.99
			GNP p	er capita (198	0 \$M)		
1980	4 085	4 085	4 085	4 085	4 085	4 085	4 085
1990	5 280	4 920	4 600	3 486	5 060	4 920	4 980
2000	7 420	6 5 1 0	5 790	3711	7 150	6 510	6 760
2030	24 640	16 680	11 930	3 620	26 920	17 820	20 590
			Labo	our force (milli	ons)		
1980	4.94	4.94.	4.94	4.94	4.94	4.94	4.94
1990	6.65	6.65	6.65	6.65	6.65	6.65	6.65
2000	8.11	8.46	8.81	10.55	8.37	8.46	8.43
2030	12.65	16.83	21.49	51.89	12.62	16.75	14.97
			New job requi	rement per yea	ur (thousands)		
1980	175 270	175 270	175 27 <b>0</b>	175 270	175 270	175 270	175 270
1990	173 870	173 870	173 87 <b>0</b>	173 870	173 870	173 870	173 870
2000	139 300	215 840	293 190	694 600	185 470	215 840	202 610
2030	130 830	357 730	652 700	3 203 270	83 280	338 450	225 590
			Primary so	chool students	(millions)		
1980	2.12	2.12	2.12	2.12	2.12	2.12	2.12
1990	2.08	2.41	2.74	4.39	2.33	2.41	2.38
2000	2.45	3.27	4.09	8.17	2.69	3.27	3.02
2030	3.52	6.21	9.69	39.74	2.73	5.42	4.40

## Table 1 (continued)

	Total fertility rate				Replacement	Replacement	Replacement
	3	4	5	10	2025	2055	2070
			Secondary	school students	(millions)		
1980	1.17	1.17	1 17	1 17	1 17	1 17	1 17
1990	1.32	1.32	1.32	1.32	1 32	1 32	1 32
2000	1.28	1.71	2.13	4 26	1.52	1.52	1.63
2030	1.95	3.30	5.01	18.91	1.64	3.09	2.49
			Population a	t high health ris	k (millions)		
1980	5.03	5.03	5.03	5.03	5.03	5.03	5.03
1990	6.19	6.84	7.49	10.75	6.48	6.84	6.68
2000	7.33	8.44	9.56	15.34	7.47	8.44	8.04
2030	10.32	16.25	23.61	85.05	9.05	14.83	12.59
			Household	ls requiring new	housing		
1980	134 030	134 030	134 030	134 030	134 030	134 030	134 030
1990	182 930	182 930	182 930	182 930	182 930	182 930	182 930
2000	186 030	207 480	228 110	320 920	202 200	207 480	205 370
2030	224 990	382 890	570 580	1 974 080	205 150	382 890	303 450
			Aver	age household s	size		
1980	5.2	5.2	5.2	5.2	5.2	5.2	5.2
1990	4.5	4.9	5.2	6.9	4.7	4.9	4.8
2000	4.3	4.9	5.4	8.4	4.5	4.9	4.7
2030	4.3	4.9	5.4	8.1	3.9	4.6	4.4
			Average la	und per capita (l	nectares)		
1980	0.45	0.45	0.45	0.45	0.45	0.45	0.45
1990	0.37	0.35	0.33	0.25	0.36	0.35	0.35
2000	0.31	0.27	0.24	0.16	0.29	0.27	0.28
2030	0.19	0.14	0.10	0.03	0.21	0.14	0.16

## Table 1 (continued)

Source: National Population and Family Development Board.