

CHAPTER 1

EDUCATION IN MALAYSIA

1.1 Introduction

The government plays a leading role, directly and indirectly, in the development of the national economy. The general path of economic development has been mapped out in a series of five-year plans and also in the Outline Perspective Plans (OPP). Since 1971, it was guided by the philosophy of the New Economic Policy (NEP) and later by the National Development Policy (NDP). The NEP was initiated with the overriding objective of fostering national unity and nation building, through the eradication of poverty, irrespective of race, and the restructuring of society to eliminate the identification of race with economic function and geographical location. The NDP, which is embodied in Malaysia's Second Outline Perspective Plan (OPP2) covering the period 1991 - 2000, maintains the basic strategies of the NEP. In particular, the fundamental goals of eradicating poverty and restructuring society so as to correct imbalances and thereby contributing towards national unity remain. The ultimate goal is still national unity because a united

society promotes social and political stability and sustained development. However the NDP focuses more on human resource development as a fundamental requirement for growth with equity. It also sets the pace for Malaysia to become a fully developed nation by the year 2020, not only economically but also in terms of social justice, moral and ethical values, political sophistication, quality of life and administrative efficiency of the government¹.

1.2 Education in Malaysia

Since independence in 1957, the Malay ruling class saw in education the key to greater social equity and justice. Therefore education has become a key cornerstone of a redistribution policy and strategy². Thus, the rapid provision of universal free primary education and lower-secondary education was initiated. This initiative greatly enhanced access to education for all children. In particular, Malay children from the rural areas were provided with Malay secondary education. In order to accelerate Malay economic and educational development in both rural and urban areas, the special

¹ Malaysia, Sixth Malaysia Plan, pp 3-4, Information Malaysia 1995 Yearbook, pp362-363.

² A massive rural development program to accelerate the modernization process and the diversification of the peasant subsistence sector was conceived and, until May 1969, was pursued within the framework of the country's 5-year development plans.

privileges that were provided for in the 1948 Federation of Malaya agreement, were entrenched initially for a 15-year period under Article 153 of the country's 1957 independence constitution³. Though controversial, the incorporation of special privileges was defended as a moral and political necessity by the Malay leadership. The policy was accepted or acquiesced to by the non-Malay leadership as a necessary political accommodation⁴. Education then was accorded only a social and political dimension. The Razak Report (1956) and the Rahman Talib Report (1960) emphasized the political and social over the economic dimensions of education⁵. Emphasis was also given to making citizens trained in the agricultural, industrial and technical fields but education was not a priority in development plans. Both reports identified national unity as the principal goal of education. In line with this aim, children of all ethnic groups would be brought together under a national education system.

³ This provision ensured the reservation of a proportion as might be deemed reasonable in the public service, for scholarships, and for similar educational and training privileges for Malays. An additional provision was incorporated into Section 47 of the University of Malaya Constitution, which, inter alia, provides that students who had been awarded Federal or State scholarships or other similar financial assistance from public funds for University degree courses shall not be refused admission if they satisfy such requirements. These compensatory provisions for the Malays were incorporated to enable them to be provided with greater access to education and therefore better opportunities for employment and commercial activities in the country's growing bureaucracy and economy. See, Selvaratnam V. (1988).

⁴ Selvaratnam V., "Ethnicity, Inequality, and Higher Education in Malaysia", *Comparative Education Review* 32, no.2 (1988), p.178.

⁵ Lee Kiong Hock, "Human Resources and Skill Development", in *Malaysian Experience : Change and Challenges*, National Institute of Public Administration, Kuala Lumpur (1994), p 820.

Changes to the national education policy were introduced, after May 1969⁶, with the introduction of the NEP in 1971. Dissatisfactions over the inequalities between Malays and other ethnic groups brought about a major shift in policy from growth to an egalitarian growth distribution strategy aimed at the eradication of poverty irrespective of ethnic origin. (Education is now treated as an economic resource and is orientated to ensure the nation's human resources are developed and employed for maximum contribution to national economic development.) (Thus the objectives of education were extended to cover nation-building and universal literacy as well as the economic goals of the country⁷.) In order to effect the desired changes in economic imbalances so as to reduce and eventually eliminate the identification of race with economic function a major shift in higher education policy was conceived and implemented. Higher education in Malaysia would become a major component of the affirmative action strategy outlined in the NEP to create a more equitable society. Under the NEP, Bumiputras⁸ have gained favoured opportunities in higher education by means of special financial support, the

⁶ May 13, 1969 saw the interethnic conflict brought about by growing income disparities, particularly intra-group inequality and dissatisfactions within the Malay community and fear of an erosion of political power of the ruling class. At the same time, among the non-Malays, there was a feeling that they had been discriminated against for too long.

⁷ Lee Kiong Hock, "Human Resources and Skill Development", in *Malaysian Experience: Change and Challenges*, National Institute of Public Administration, Kuala Lumpur (1994), p 823.

⁸ Bumiputras refer to the Malays and the indigenous people of Malaysia. In this paper, the term "Malay" is used interchangeably with the term "Bumiputra".

mandated use of *Bahasa Malaysia* as the language of instruction, preferential access to universities and colleges, and the establishment of new programmes and institutions reserved exclusively for Malays⁹. Special efforts have been made to build up Malay enrolment particularly in science and technology and in professional faculties, which were predominantly occupied by the non-Malays/non-Bumiputras¹⁰. In order to effectively coordinate the administration and implementation of the intake of a greater number of Bumiputra students, the government established a central unit for the selection of students into the local universities called *Unit Pusat Universiti (UPU)* within the Ministry of Education. This policy helped the government to change the ethnic mix of the student population in the universities. In particular, the direct intervention enabled Bumiputra students to gain a dominant position in terms of ethnic numbers into the country's seven universities at that time¹¹. It helped to correct the imbalance in enrolment between the Bumiputra and non-Bumiputra students (see Table 1.1). However, the government's intervention has made competition for places

⁹ Harman G., "Student Selection and Admission to Higher Education: Policies and Practices in the Asian Region", *Higher Education* 27 (1994), pp. 313-339.

¹⁰ Wang B.C., "Governmental Intervention in Ethnic Stratification: Effects on the Distributions of Students among Fields of Study", *Comparative Education Review* 21, No. 1 (1977), pp. 111.

¹¹ Selvaratnam V., "Ethnicity, Inequality, and Higher Education in Malaysia", *Comparative Education Review* 32, no.2 (1988), pp. 185-186.

among the non-Bumiputra students very intense. As a result, many candidates who qualify on academic criteria were rejected from the local universities. Therefore, most of them sought an overseas higher education or enrolled in a local private institution of education at considerable costs¹² to their families¹³ (see Table 1.2).

Table 1.1
The Ethnic Mix in Local Universities (1985)

University	Bumiputra	Non-bumiputra (in percentage)
Universiti Malaya	53.73	46.27
Universiti Sains Malaysia	55.45	44.55
Universiti Kebangsaan Malaysia	72.52	27.48
Universiti Pertanian Malaysia	80.71	19.29
Universiti Teknologi Malaysia	75.35	24.65
International Islamic University	92.84	7.16
Universiti Utara Malaysia	70.11	29.89

Source : Malaysia, Fifth Malaysian Plan, 1986-1990 (Kuala Lumpur Government Printer, 1986), pp. 490-91

Table 1.2
The number of Malaysian Students in Degree Courses Overseas.

Ethnic Group	1980		1985	
	No.	%	No.	%
Bumiputra	5194	26.62	6034	26.6
Chinese	11533	59.11	13406	59.1
Indian	2676	13.72	136	0.6

Source: Malaysia, Fifth Malaysian Plan, 1986-1990 (Kuala Lumpur Government Printer, 1986), pp.490-91.

¹² Relative to the public universities and other public tertiary institutions.

¹³ Selvaratnam V., "Ethnicity, Inequality, and Higher Education in Malaysia", *Comparative Education Review* 32, no.2 (1988), pp.185-186.

During this period (1971-1990), an attempt at forecasting manpower requirements by occupations, in order to improve planning of educational and training programmes was made. Government policies would now be targeted towards the *Bumiputra* community, to ensure the vast projected requirements for trained manpower among the *Bumiputra* community would be met. Emphasis would be given to the teaching of science and mathematics, increasing enrolment in science, technical and vocational courses at the upper-secondary level, and the expansion of diploma courses to remedy the existing imbalances between diploma and degree courses to meet the demand for manpower at the sub-professional and professional level¹⁴ (see table 1.4). The target was to achieve a 60 percent enrolment ratio in the scientific and technical fields at the diploma and degree levels to be achieved by 1985¹⁵.

In 1991, the National Development Policy (NDP) was implemented which emphasized growth with equity. Human resource development would play a key role in the NDP. The period of the NDP calls for rapid expansion at the secondary level with a bias towards vocational schooling, and also at the certificate and

¹⁴ Lee Kiong Hock, "Human Resources and Skill Development", in *Malaysian Experience : Change and Challenges*, National Institute of Public Administration, Kuala Lumpur (1994), p.826.

¹⁵ Ibid, p.828.

diploma levels (designed to correct the bias towards degree level education). Steps were taken to improve the responsiveness of public training institutions to market demand, expand the role of the private sector, and review and revamp existing curriculum. The corporatization and privatization of training institutions and universities will be undertaken to improve the efficiency of the institutions. Private sector participation in education will be encouraged, including setting of twinning programmes and preparatory courses. All these introduced to provide for an effective human resource-led development strategy¹⁶.

The increasing importance of education and human resource development as one of the components in the national development process can be seen in the growth of government development expenditure¹⁷ on education through the years, from the First Five-Year Plan (FMP) to the present Sixth Malaysia Plan (SMP) (Table 1.3). The percentage share of education in actual government expenditure for the First Malaysia Plan (1MP) was 7.8. For the Second Malaysia Plan (2MP), the share was 6.9 percent, for the Third Malaysia Plan (3MP) 10.1 and for

¹⁶ Lee Kiong Hock, "Human Resources and Skill Development", *Malaysian Experience : Change and Challenges*, in National Institute of Public Administration, Kuala Lumpur (1994), pp. 830-831.

¹⁷ Reference is to development expenditure alone and does not include recurrent expenditure.

the Fourth Malaysia Plan (4MP) 7.3. Under the Fifth Malaysia Plan (5MP), the percentage share of government expenditure on education rose to 16.1 percent, the highest ever in all the plans, although the planned allocation was 13.9 percent. Under the Sixth Malaysia Plan (6MP) education's share stood at 15.5 percent of planned spending - higher than the 13.9 percent allocated for the 5MP. The education's share of total government expenditure shows the increasing importance placed on education.

(However, Vision 2020 calls for the development of a science- and technology-based culture. In this vision science and technology would become integral components of socioeconomic planning and development aimed at producing a society compatible with the move towards a modern industrial economy. Thus, Malaysia has to place importance on planning and development of human resources through education and training, to ensure an adequate supply of suitably skilled manpower¹⁸ to meet the growing needs of the country, especially in the science and technical fields.)

¹⁸ Malaysia, Fourth Malaysia Plan. 1981-1985.

Table 1.3: Malaysian Development Plan Targets and Actual Expenditure Percentage Share.

6MP	FMP ^a		SMP ^a		1MP		2MP		3MP		4MP		5MP	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
Economic 56.8	67.9	75.7	68.7	66.5	60.2	60.1	63.7	72.3	68.3	64.0	57.9	60.5	58.8	64.8
Social 24.5	24.2	13.8	22.8	15.6	20.8	17.7	14.7	13.7	16.6	17.1	16.2	21.5	22.5	24.8
of which Education	8.3	6.0	12.1	8.9	9.7	7.8	7.4	6.9	9.0	7.3	7.6	10.1	13.9	16.1
Gen. Admin. and Defence 18.7	7.9	10.7	8.4	17.9	19.0	22.1	21.5	14.0	15.1	18.8	25.9	17.9	18.7	10.5
Total Expenditure (RM Million) 55000	1149	1007	2150	2652	4551	4242	7250	9821	18555	24937	39329	46320	40075	35300

Note: ^a Peninsular Malaysia only.

Source: Malaya, Second Five-Year Plan, 1961-65, Table V, pp. 29-30; Malaysia, First Malaysia Plan, 1966-1970,

Table 4.1, pp.69-70; Malaysia, Second Malaysia Plan, 1971-1975, Table 5.1, pp. 68-71; Malaysia, Third Malaysia Plan, 1976-1980, Table 12.3, pp. 240-241; Malaysia, Fourth Malaysia Plan, 1981-1985, Table 13.1, pp 240-243; Malaysia, Fifth Malaysia Plan, 1986-1990, Table 7.9, p. 242; Malaysia, Sixth Malaysia Plan, 1991-1995, Table 2.3, p. 62.

Source: Lee Kiong Hock, "Human Resources and Skill Development", in *Malaysian Development Experience: Change and Challenges*, National Institute of Public Administration, Kuala Lumpur (1994), p. 822.

Table 1.4 gives the ratio of arts, science and technical enrolment from 1970 to 1995; together with output for the Fourth, Fifth and Sixth Malaysia Plan (4MP, 5MP, 6MP) by level of education in local public institutions of learning. The proportion of students enrolled in the physical and natural sciences at the

degree level showed a significant decrease¹⁹ from 40.2 percent in 1980 to 27 percent in 1995. Enrolment was 33 percent under the 4MP, 33 percent under the 5MP and 25 percent under the 6MP. Likewise for the diploma courses, the ratio fell from 26.7 percent in 1980 to 20 percent in 1995. Enrolment was 25 percent under the 4MP, 22 percent under the 5MP and 19 percent under the 6MP. However, significant increases can be observed at both the degree and diploma levels in the technical fields. The proportion of students enrolled in the technical courses increased from 11.2 percent in 1980 to 16 percent in 1995 at the degree level and from 32 percent in 1980 to 33 percent in 1995 at the diploma level. Output of science graduates for both degree and diploma levels from the period of the 4MP showed a drastic decline. The period of the 6MP only produce 25 percent science graduates at the degree level and 19 percent at the diploma level. Although there is an increase of technical graduates from the 4MP to 6MP, Malaysia's target of 60 percent²⁰ science and technical graduates is far from being achieved. The government has reviewed shortfalls in its restructuring objectives that highlighted the bias in the existing tertiary system towards degree programmes which resulted

¹⁹ It must be mentioned here that, part of the fall in enrolment is due to reclassifications of some 'science' courses to 'technical'.

²⁰ Lee Kiong Hock, "Human Resources and Skill Development", *Malaysian Development Experience: Change and Challenges*, National Institute of Public Administration, Kuala Lumpur (1994), p. 828.

in significant shortages of middle-level manpower, especially in the scientific and technical fields. Therefore, since the start of the Fourth Malaysia Plan, the target was to achieve a sixty-percent enrolment ratio in the science and technical fields at the degree and diploma levels. In fact, there seems to be a shift away from the science and technical fields. With rapid industrialization, there is a requirement for labour in the professional and technical fields, including skilled and semi-skilled workers, which is estimated at 600,000 persons from 1994 to 2000²¹. In view of this, the education system of the country is being restructured and reoriented to ensure that the education system can achieve the target by 2020. In fact, over the years, there appears to be a definite progression in the plans, policies and practices of the government in the area of education and training. Malaysia has progressed from educational and training development based on social demand, to planning based on manpower projections²² and has moved towards human resource development based on labour market monitoring and accountability²³.

²¹ 23rd Economic Report, Ministry of Finance, 1995.

²² Manpower forecasts, for the first time was made in terms of occupations in 1973, in order to improve planning of educational and training programmes. Despite the apparent unreliability, long-term forecasts of manpower requirements are useful for educational planning purposes. See Ozay Mehmet, "The Malaysian experience in Manpower Planning and Labour Market Policies", *Human Resource Planning: The Asian Experience*, ILO (1987).

²³ See Lee Kiong Hock (1994), *Human Resources and Skill Development*, which gives a summary of policies, plans and practices of the Malaysian Government on education from the First Five-Year Plan, to the Sixth Malaysia Plan (1956 - 1995).

Table 1.4 : Percentage Distribution of Enrollment and Output in
Local Public Institutions by Diploma and Degree Levels.

Level	1970	1975	1980	1985	1990	1995	4MP	5MP	6MP
Degree: Arts	65.46	55.48	48.6	54	58	57	55	53	61
Science	34.54	44.52	40.2	33	27	27	35	33	25
Technical			11.2	14	15	16	10	14	14
Diploma: Arts	n.a.	n.a.	41.3	51	53	47	43	50	53
Science	n.a.	n.a.	27.6	22	17	20	25	22	19
Technical	n.a.	n.a.	32.0	27	30	33	32	28	28

- Note : 1. Arts : includes arts and humanities, economics and business
Science: includes agriculture and related sciences, medicine, dentistry, pure sciences
Technical : includes engineering, architecture and town planning, surveying , material technology.
2. 4MP - Fourth Malaysia Plan, 5MP - Fifth Malaysia Plan , 6MP - Sixth Malaysia Plan.

Source : Lee Kiong Hock, "Human Resources and Skill Development", *Malaysian Development Experience : Change and Challenges*, National Institute of Public Administration, Kuala Lumpur (1994), Table 3, p.825; Malaysia, Fifth Malaysia Plan, table 4.9, p151; Sixth Malaysia Plan, table 5.2, 5.3, pp. 164-165.

1.3 Rationale for Study

The Government has been aggressively promoting policies and programmes designed to eliminate Malay economic and educational disadvantage. Educational expansion in the years has greatly improved opportunities for Malays to be represented in higher education. However, the target of 60 percent enrolment in the science and technical fields has not been reached. Measures to encourage further education and instill interest in science and technical subjects in students, irrespective of ethnic origin, constitute a continuous

process. In addition, students' perception of the importance of education for future success is probably influenced by the relationship that exists between education and occupational status. Thus, students' high socioeconomic aspirations and expectations may be influenced by government policies in terms of selection into higher institutions of learning and aiding educational advancement. Given the importance of education in this era, and in facilitating the attainment of the goals of Vision 2020, the present study focuses on student aspirations, their educational decisions and educational choices in relation to the science and technical or arts fields. The idea is to examine students' personal educational decisions and choices; and what determines these decisions and choices, so that these groups of vulnerable²⁴ students can be moved in the right direction and maintains the educational as well as the economic goals of the country. (Of practical importance is the possibility that students' occupational and educational expectations and, therefore, the choices they make in relation to their education may be modified by appropriate government policies.) In this light, the focus must be on policy variables that affect the

²⁴ Students in form four are in a transition stage whereby they have just stepped out of the lower-secondary curriculum and are on the path to making decisions that will decide their future. Their decisions can be influenced or directed by educational or career guidance.

decision to continue schooling. In addition, given the importance of education in science and technical programmes in the context of national development, the study also focuses on identifying policy variables that influences students' choices between the sciences and the arts. The factors that influence these expectations or educational choices may be subject to policy manipulation and therefore enable the government to alter and affect students' decisions in the desired directions in line with the nation's national development goals.

This study is divided into six chapters. Chapter 2 presents a review of Malaysian literature and other studies. A comparison is made between the two based on the research already done. A statement of principal objectives and hypothesis will also be given in this chapter. Chapter 3 reviews the scope of study and methodology for the analysis. A choice model for the determinants of educational choice is adopted for analysis. The model follows closely to Marceau's (1979) specification. Estimates of the model are taken by means of maximum likelihood and the relationship is studied by taking the odds. Chapter 4 presents the background and characteristics of the sample. Chapter 5 presents the students' aspirations and correlates of the decision to continue education. Chapter 6 presents a quantitative

analysis by taking logistic regressions of the decision to continue further studies and the choice between the science and technical or the arts fields. The results and estimates of the analysis based on the model of educational choice will be given here. Lastly, a summary of the principal findings and a discussion on policy implications are presented in chapter 7.