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**Preferential policy in higher education in Malaysia: A case  
study of Malay graduates at the University of Science, Malaysia**

Kassim, Mustapa Bin, Ph.D.

The University of Wisconsin - Madison, 1989

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A dissertation entitled

PREFERENTIAL POLICY IN HIGHER EDUCATION IN  
MALAYSIA: A CASE STUDY OF MALAY GRADUATES  
AT THE UNIVERSITY OF SCIENCE, MALAYSIA

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University of Wisconsin-Madison in partial fulfillment of  
the requirements for the degree of Doctor of Philosophy

by

MUSTAPA BIN KASSIM

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MUSTAPA BIN KASSIM

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PREFERENTIAL POLICY IN HIGHER EDUCATION IN  
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Mustapa Bin Kassim

under the supervision of Professor Robert L. Koehl

In Malaysia, preferential policies have been given a constitutional status. Article 153 of the Constitution authorizes a mechanism "to safeguard the special position of the Malays through a system of quotas" applied, among others, to scholarships and to educational training. In 1971, the government introduced the policy of reservation that makes it obligatory for all higher educational institutions to reserve 55% of their places for Malay students. The objective was to address the wide gap that existed between Malays and non-Malays in educational opportunities, particularly in science and technological studies, at the tertiary level.

One major question in this study was whether this powerful government policy instrument promotes growth and equity for the Malays.

A case study of the cohort of 3784 Malay graduating classes from 1982 to 1988 at the University of Science,



Malaysia was undertaken to examine the impact of the policies. Data for this study were obtained from students' personal files and university records. The data were organized into eleven main variables.

The main findings are: the gap between Malays and non-Malays in science and arts schools narrowed over the period; Malay students from residential schools and from the matriculation program had taken an increasing portion of the Malay proportion in science schools; there had been a steady pattern of improvement in the representation of Malays of low socioeconomic status and Malays from rural areas; the awarding of financial assistance benefited a greater number of Malays from low socioeconomic groups; the education opportunities for Malay females were improving; and an analysis of Malay graduates in the private sector indicated that a substantial percentage of them from rural areas and from low socioeconomic groups entered this sector.

One major implication of the policy is that although the percentages and actual numbers of Malays increased significantly, and although the percentages of non-Malays declined, the actual numbers of non-Malays increased continuously over the years. The increase of all ethnic representation were established. Thus, the preferential policies did not reduce the absolute number of non-Malays in higher education.

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This dissertation would not have been completed without the tolerance, dedication and understanding of my wife, Som. It is to her that this dissertation is dedicated. To my children, Dura, Fizal and Rini, they will one day understand why I had to 'slog' during those four long years. I pray that they will be more successful in their future. Inshaallah.

## TABLE OF CONTENTS

	Page
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	v
CHAPTER I: INTRODUCTION	
1.1 The Study .....	1
1.2 Access to Schooling .....	2
1.3 Context of the Study .....	10
1.4 The Purpose of the Study .....	26
1.5 The Case Study .....	30
1.6 Source of Data .....	34
1.7 Data Organization .....	34
1.8 Significance of the Study .....	38
1.9 Limitation of the Study .....	40
1.10 Literature Review .....	42
1.10.1 Education and Mobility .....	42
1.10.2 Empirical Evidence: Malaysia .....	57
CHAPTER II: PREFERENTIAL POLICY	
2.1 Introduction .....	88
2.2 Affirmative Action in Perspective .....	90
2.3 "The Sons of the Soil" and the Migrants - A Competitive Approach .....	102
2.4 Preferential Policy in Malaysia .....	115
2.5 Historical Background: Malay Special Rights .....	116
2.6 Preferential Policy in Education .....	129

## CHAPTER III: THE MALAYSIAN SOCIETY

3.1	Introduction .....	147
3.2	The Malaysian Society .....	148
3.3	The Malay Society - Background .....	173
3.4	The Political and Bureaucratic Elites .....	198
3.5	Education and Employment .....	203
3.6	The Social Stratification - The Malay Society .....	224
3.7	The Psychology of Malay Ethnic Claims .....	231

CHAPTER IV: THE STATE'S INTERVENTION STRATEGY IN HIGHER  
EDUCATION.

4.1	Introduction .....	239
4.2	Historical Background of Malaysian Higher Education .....	244
4.3	Intervention Strategies in Higher Education .....	259
4.4	Implementations of Strategies .....	271
4.4.1	The State of Education Development Before 1970 .....	271
4.4.2	Education Development After 1970 .....	290
4.4.3	Development in Elementary and Secondary Schools .....	292
4.4.4	Residential Schools .....	308
4.4.5	Academic Performance .....	314
4.4.6	Access to Higher Education .....	333
4.4.7	Effects of Control of Admission on Quality of Tertiary Education .....	356

## CHAPTER V: THE UNIVERSITY OF SCIENCE, MALAYSIA.

5.1	Establishment and Development .....	366
5.2	The Preferential Policy and Student Admission .....	375
5.3	Graduation .....	395
5.4	Gender .....	404
5.5	Development .....	410
5.6	Implications .....	418

## CHAPTER VI: THE CASE STUDY

6.1	Introduction .....	421
6.2	The Malay Graduates .....	422
6.3	Participation .....	430
6.3.1	Demographic .....	431
6.3.2	Socioeconomic Status .....	455
6.4	Orientation .....	475
6.4.1	Fields of Study .....	476
6.4.2	Financial Assistance .....	498
6.4.3	Development .....	507
6.5	Employment .....	512
6.5.1	Sector of Employment .....	517
6.5.2	Fields of Employment .....	529

CHAPTER VII: SUMMARY AND CONCLUSION	
7.1 The Context of the Study .....	538
7.2 The Major Findings and Discussion .....	541
7.2.1 The National Level .....	542
7.2.2 The Case Study .....	545
7.3 Implications .....	557
7.4 Implications for Further Research .....	564
7.5 Concluding Remarks .....	566
BIBLIOGRAPHY .....	568



## LIST OF TABLES

1.1	Malaysia: Population Distribution .....	21
1.2	Subjects of the Study .....	33
1.3	Numbers in Age Cohort per Household, Students per Household in Assisted Schools, Actual and Norm, by Educational Level and Quintile of Household per Capita Income .....	60
1.4	Percentages of Youths Currently (1972) Enrolled in Schools by Socioeconomic Status and Parental Advantage Scales .....	62
1.5	Percentage of Age 15+ Youths Currently (1972) Enrolled in Schools who have not completed Form III by Socioeconomic Status and Parental Advantage Scales .....	69
1.6	Some Occupational Attainment by Education Attainment within Fathers' Occupational Groups, Petaling Jaya .....	84
1.7	Social Mobility in West Malaysia by Ethnicity and Education .....	85
2.1	Enrollments in Assisted Secondary Schools ....	134
2.2	Number of Students Enrolled in the University of Malaya between 1959-1960 and 1967-1968 Academic Sessions .....	139
2.3	Commulative Output of Malay Graduates in Science and Technology at the University of Malaya, 1964-70 .....	140
3.1	Public Sector: Salary Structure, 1977 .....	221
3.2	Malaysia: Percentage of Employment by Occupation and Ethnic Groups - 1980 and 1985 ..	222
3.3	Malay Occupational Distribution - 1970, 1980 and 1985 (Percentage and thousands) .....	223

4.1	Annual Enrollment of Students (with Ethnic Breakdown) in the University of Malaya, 1959-1970 .....	261
4.2	Percentage Distribution of Students by Ethnic Groups Between Humanities and Liberal Arts, and Sciences in the University of Malaya, 1959-1970 .....	262
4.3	Malaysian Certificate of Education Results for Candidates from Malay-Medium Assisted Schools ..	278
4.4	Malaysian Certificate of Education Examination Results for Candidates from English-Medium Assisted Schools .....	279
4.5	Comparative Results of the Malaysian Certificate of Education Examination for Candidates from Malay-Medium and English-Medium Assisted Schools .....	282
4.6	Higher School Certificate Examination: Candidates from Malay-Medium Schools .....	283
4.7	Higher School Certificate Examination: Candidates from English-Medium Schools .....	284
4.8	Higher School Certificate Examination in Science: Comparative Analysis of Results for Candidates from Assisted Malay-Medium and Assisted English-Medium Schools .....	287
4.9	Higher School Certificate Examination in Arts: Comparative Analysis of Results for Candidates from Assisted Malay-Medium and Assisted English-Medium Schools .....	288
4.10	Percentage Distribution of Student Enrollment in the University of Malaya, by Ethnic Group within Faculties .....	289
4.11	Ministry of Education Financial Allocation 1971-1985 .....	291
4.12	Locations, Schools, Classrooms, Enrollment in Elementary Schools in Peninsular Malaysia: 1972, 1978, 1984 .....	294

4.13	Locations, Schools, Classrooms, Enrollment and Teachers in Secondary Schools in Peninsular Malaysia, 1972, 1978, 1984 .....	296
4.14	Enrollment in Elementary Schools, Peninsular Malaysia, 1970 and 1980 .....	297
4.15	Enrollment in Lower Secondary Schools, Peninsular Malaysia, 1970 and 1980 .....	299
4.16	Enrollment in Upper Secondary Schools, Peninsular Malaysia, 1970 and 1980 .....	300
4.17	Number of Students in Arts Classes Sitting for MCE Examination, Peninsular Malaysia, 1974-1983 .....	301
4.18	Number of Students in Science Classes Sitting for MCE Examination, Peninsular Malaysia, 1974-1983 .....	302
4.19	Enrollment in Vocational and Technical Schools, Peninsular Malaysia, 1970-1984 .....	304
4.20	Form IV Enrollment Ratio, Peninsular Malaysia, 1970 and 1980 .....	305
4.21	Form IV Enrollment in Science Classes, Peninsular Malaysia, 1970-1984 .....	306
4.22	Form IV Enrollment in Arts Classes, Peninsular Malaysia, 1970-1984 .....	307
4.23	Form One Enrollment in Residential Schools, Peninsular Malaysia, 1971-1984 .....	311
4.24	Form One Enrollment at the MARA Junior Science College, Malaysia, 1974-1984 .....	312
4.25	Form One Enrollment in MARA Junior Science College according to State .....	313
4.26	Standard V Assessment Percentages of Passes (Grades A,B,C) according to Subjects and Ethnic Groups, 1976-1983 .....	316

4.27	Standard V Assessment Percentages of Passes (Grades A,B,C) in Various Subjects According to Location, 1976-1983 .....	317
4.28	Lower Certificate of Education (LCE) Examination Results, Peninsular Malaysia, 1977-1983 .....	318
4.29	Lower Certificate of Education (LCE) Students' Achievement (in Percentages) in Mathematics and Science, According to Ethnic Groups, 1980-1982 .....	319
4.30	Grade Passes (A,B,C) in Lower Certificate of Education According to Location, 1977-1983 ...	320
4.31	Lower Certificate of Education (LCE) in Government Residential Schools, 1974-1983 ....	321
4.32	Lower Certificate of Education (LCE) in MARA Junior Science College, 1974-1983 .....	322
4.33	Percentage of Student Performance in the Malaysian Certificate of Education (MCE) in Science Stream, Peninsular Malaysia, 1974-1983 .....	323
4.34	Percentage of Student Performance in the Malaysian Certificate of Education (MCE) in Arts Stream, Peninsular Malaysia, 1974-1983 .....	324
4.35	The Malaysian Certificate of Education in Science Stream at Residential Schools, Peninsular Malaysia, 1974-1983 .....	325
4.36	The Malaysian Certificate of Education in Arts Stream at Residential Schools, Peninsular Malaysia, 1974-1983 .....	326
4.37	The Malaysian Certificate of Education at the MARA Junior Science College, 1974-1983 ....	327
4.38	Full Certificate Awarded in the Higher School Certificate (HSC) Examination, Peninsular Malaysia, According to Ethnic Groups and Academic Streams, 1975-1981 .....	329

4.39	Higher School Certificate Results at Residential Schools, Peninsular Malaysia, 1975-1983 .....	330
4.40	Matriculation Program, Peninsular Malaysia, 1970-1983 .....	341
4.41	Admission Grading Points for HSC .....	343
4.42	Ethnic Enrollment Figures at Universities in Peninsular Malaysia, 1967-1985 .....	347
4.43	Admission at the Universities, Academic Sessions, 1971/72 - 1983/84 .....	348
4.44	Enrollment at Universities According to Ethnic Groups, 1970-1985 .....	349
4.45	Enrollment of Locally and Foreign Enrolled Students at Degree Level, 1980 and 1985 .....	353
4.46	Applicants and University Admission 1968-1975	354
4.47	Enrollment in Selected Fields of Study at Degree Level By Race, 1970-1975 .....	355
4.48	First Degree, Admission and Graduation, at Malaysian Colleges/Universities, During the Second, Third and Fourth Malaysian Plans 1971-1983 .....	358
4.49	Distribution of Graduates in Malaysian Universities, 1986, According to Class of Degrees .....	362
4.50	Distribution of Graduates in Arts Degree, 1986 (Arts, Islamic Studies, Economics and Social Sciences) .....	363
4.51	Distribution of Graduates in Science Degree, 1986 (Sciences, Computer Studies, Applied Sciences, Housing and Planning) .....	364
4.52	Distribution of Graduates in Professional Degrees, 1986 (Law, Accountancy, Engineering and Pharmacy) .....	365

5.1	University of Science, Malaysia, Establishment of Academic Schools, 1970-1985 .....	373
5.2	University of Science, Malaysia, Student Admission 1969/70 - 1985/86 .....	379
5.3	Student Admission in School of Natural Sciences	380
5.4	Student Admission in School of Humanities ....	381
5.5	Student Admission in School of Social Sciences	382
5.6	Student Admission in School of Housing, Building and Planning .....	383
5.7	Student Admission in School of Education (Humanities) .....	385
5.8	Student Admission in School of Education (Science) .....	386
5.9	Student Admission in School of Pharmaceutical Sciences .....	387
5.10	Student Admission in School of Applied Sciences	388
5.11	Student Admission in School of Medical Sciences	388
5.12	Student Admission in School of Computer Science	389
5.13	Student Admission in School of Mass Communication .....	389
5.14	Student Admission in School of Management ....	390
5.15	Student Admission in School of Engineering Sciences .....	390
5.16	Student Admission in School of Industrial Technology .....	391
5.17	Matriculation Program - Year II, University of Science, Malaysia .....	391
5.18	Distribution of Matriculation Program Students, 1979-1986 .....	393

5.19	Student Admission in Off-Campus Programs, 1971-1985 .....	394
5.20	University of Science, Malaysia - Graduation Year 1972-1988 .....	397
5.21	Admission and Graduation in University of Science, Malaysia .....	398
5.22	Graduation According to Academic Schools - 1972-1988, University of Science, Malaysia (Natural Science, Applied Science and Education Science) .....	399
5.23	Graduation According to Academic Schools, 1972-1988, University of Science, Malaysia (Pharmacy and Housing, Building and Planning)..	400
5.24	Graduation According to Academic Schools, 1972-1988, University of Science, Malaysia, (Social Science, Humanities and Education Humanities) .....	401
5.25	Graduation According to Academic Schools, 1986-1988, University of Science, Malaysia, (Medical Science and Computer Science) .....	403
5.26	Graduation According to Academic Schools, 1988, University of Science, Malaysia, (Management, Engineering, Communication and Industrial Technology) .....	403
5.27	Percentages of Students According to Gender in Lower, Upper, Post and Higher Education in Malaysia in 1974, 1980, 1983 and 1985 .....	405
5.28	Malay Graduates According to Gender, University of Science, Malaysia .....	406
5.29	Distribution of Graduates According to Gender and Ethnic Groups, 1982, 1985, 1988 .....	408
5.30	Distribution of Malay Graduates According to Gender in Science and Arts Related Schools ...	409

5.31	Distribution of Malay Graduates According to Science and Arts Related Schools: A Comparison, 1978-1980, 1982-1988, 1989 (in Percentages) ...	413
5.32	Distribution of Malay Graduates According to Gender, 1978-1980, 1982-1988, 1989 .....	414
5.33	Distribution of Malay Graduates According to Types of Secondary Schools (in Percentages) ...	416
5.34	Distribution of Malay Graduates According to Types of Academic Qualification at Entry Points .....	418
6.1	Distribution of Malay Graduates According to Convocation Year .....	423
6.2	Distribution of Malay Graduates According to Gender .....	424
6.3	Distribution of Malay Graduates According to Academic Schools .....	424
6.4	Distribution of Malay Graduates According to Year of Admission .....	425
6.5	Distribution of Malay Graduates According to Types of Entry Qualification .....	425
6.6	Distribution of Malay Graduates According to Types of Secondary Schools They Attended .....	426
6.7	Distribution of Malay Graduates According to Parental Occupational Groups .....	428
6.8	Distribution of Malay Graduates According to Parental Socioeconomic Status .....	428
6.9	Distribution of Malay Graduates According to Area of Residence .....	429
6.10	Distribution of Malay Graduates According to State of Residence .....	429
6.11	Demographic Distribution of Malay Graduates, 1982-1988 .....	433



6.12	Distribution of Malay Graduates According to Types of Academic Entry Qualification and Demographic .....	436
6.13	Distribution of Malay Graduates From Urban Areas According to Types of Secondary School and Types of Academic Qualification at Entry Point .....	439
6.14	Distribution of Malay Graduates From Rural Areas According to Types of Secondary School and Types of Academic Qualification at Entry Point .....	440
6.15	Demographic Distribution of Malay Graduates According to Academic Schools, 1982-1988 .....	441
6.16	Distribution of Malay Graduates According to Demographic in Science and Arts Related Schools.	443
6.17	Distribution of Malay Graduates According to Demographic, Academic Schools and Graduation Years .....	446
6.18	Distribution of Malay Graduates According to State of Residence and Demographic Pattern ...	447
6.19	Distribution of Malay Graduates According to Types of State of Residence and Demographic Pattern .....	449
6.20	Distribution of Malay Graduates According to Demographic and Gender .....	449
6.21	Distribution of Malay Graduates According to Demographic and Parental Socioeconomic Status..	450
6.22	Distribution of Malay Graduates According to Demographic Pattern: A Comparison 1978-1980, 1982-1988, 1989 .....	453
6.23	Distribution of Malay Graduates According to Types of States of Residence: A Comparison, 1978-1980, 1982-1988, 1989 .....	454
6.24	Distribution of Malay Graduates According to Parental Socioeconomic Status by Graduation Year .....	457

6.25	Distribution of Malay Graduates According to Parental Occupation and Graduation Year .....	462
6.26	Distribution of Malay Graduates According to Parental Socioeconomic Status and Types of Previous Secondary Schools .....	464
6.27	Distribution of Malay Graduates According to Parental Socioeconomic Status and Academic Qualification at Entry Point .....	465
6.28	Distribution of Malay Graduates According to Parental Socioeconomic Status and Science and Arts Related Schools .....	466
6.29	Distribution of Malay Graduates According to Parental Socioeconomic Status and Types of States of Residence .....	469
6.30	Distribution of Malay Graduates According to Gender and Socioeconomic Status .....	470
6.31	Distribution of Malay Graduates According to Parental Socioeconomic Status: A Comparison 1978-1980, 1982-1988, 1989 .....	471
6.32	Distribution of Malay Graduates According to Parental Occupations: A Comparison, 1978-1980, 1982-1988, 1989 .....	474
6.33	Distribution of Malay Graduates According to Science and Arts Related Schools .....	479
6.34	Distribution of Malay Graduates According to Academic Schools .....	480
6.35	Distribution of Malay Graduates According to Types of States of Residence and Science and Arts Related Schools .....	483
6.36	Distribution of Malay Graduates According to Academic Schools and Parental Socioeconomic Status .....	485
6.37	Distribution of Malay Graduates According to Parental Occupation and Science and Arts Related Schools .....	487

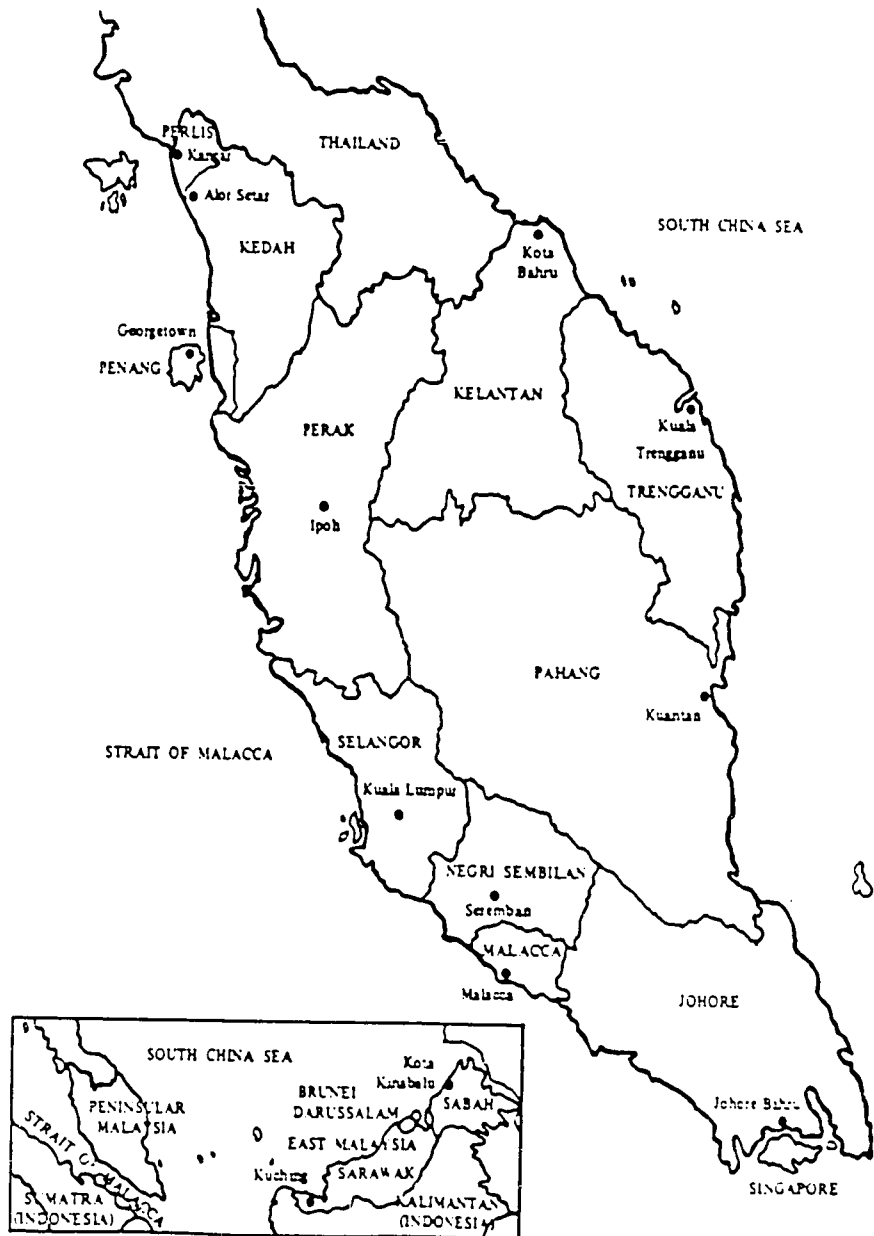
6.38	Distribution of Malay Graduates According to Gender and Science and Arts Related Schools ..	489
6.39	Gender Distribution of Malay Graduates According to Academic Schools .....	492
6.40	Distribution of Malay Graduates According to Academic Schools and Their Previous Schools ..	494
6.41	Distribution of Malay Graduates According to Previous Schools by Year of Convocation .....	495
6.42	Distribution of Malay Graduates According to Academic Schools and Entry Qualifications ....	496
6.43	Distribution of Malay Graduates According to Types of Entry Qualification By Year of Convocation .....	497
6.44	Distribution of Malay Graduates (1987-1988) According to Types of Financial Assistance and Academic Schools .....	501
6.45	Distribution of Financial Assistance to Malay Graduates According to Academic Schools .....	502
6.46	Distribution of Financial Assistance According to Parental Socioeconomic Status in Science Related Schools .....	506
6.47	Distribution of Financial Assistance According to Demographic and Types of States of Residence of Graduates .....	507
6.48	Distribution of Malay Graduates According to Science and Arts Related Schools: A Comparison .....	508
6.49	Development of Graduates' Previous Secondary Schools and Entry Qualification: A Comparison ..	510
6.50	Distribution of Financial Assistance, 1987, 1988, 1989: A Comparison .....	511
6.51	Comparison of Desired Sector of Employment of Sixth Form Students and Final Year Undergraduates .....	522

6.52	The University of Science Graduates Employed in Government Establishment, 1988 .....	525
6.53	Desired Fields of Occupation: A Comparison Between Sixth Form Students and Final Year Undergraduates .....	531
6.54	Distribution of Graduates of the University of Science, Malaysia, Listed As Government Officers, 1988 .....	532
6.55	Distribution of Graduates Produced and Graduates Employed in Public Sector According to Ethnic Group, 1988 .....	536
6.56	Distribution of Malay Graduates of the University of Science, Malaysia, Listed As Government Officers, According to Gender, 1988..	537

LIST OF FIGURES

FIGURE 1:	MALAYSIA: CLASS AND RACE STRUCTURE	....	160
FIGURE 2:	STRUCTURE OF FORMAL EDUCATION	.....	276
FIGURE 3:	THE EDUCATION SYSTEM IN MALAYSIA	.....	277

MAP OF MALAYSIA



## CHAPTER 1

### INTRODUCTION

#### 1.1 THE STUDY

The New Economic Policy (NEP) of the Malaysian government has the objectives of enhancing economic opportunities for the poor and reducing economic disparities among communal groups (Malaysia, 1971). The major emphasis of this policy is on rapid economic development, rural modernization and support for Malay commerce and industry. The rapid expansion of school and university enrollments and equalization of educational opportunities between communities, regions and social classes is similarly intended both to serve the rising needs for skilled manpower and to lessen disparities in educational qualifications. It has been regarded as self-evident by Malaysian policy makers that increasing educational opportunities would result in widening occupational opportunities, and hence foster social mobility. This study examines the impact of expanded educational opportunities under the educational preferential policy in higher education on Malay society in Malaysia. It is an attempt to determine whether the

association between social origins and educational attainment has been weakened during the recent era of rapid educational expansion and implementation of preferential policy in education.

## 1.2 ACCESS TO SCHOOLING

In many new developing nations where a large portion of the population lived in poverty, particularly during the great epoch of formal decolonization from the mid-1950s to the early 1960s, the task of modernizing elites to bring about national development was a formidable one. Attempts to achieve a greater measure of social and economic equality of opportunity were often perceived as an intrinsic part of the entire process of development (Harbinson and Myers, 1964: 33). Although there were fierce scholarly debates during this period regarding the precise nature of national development (Paulston, 1977; Adams and Farrel, 1967; Farrel, 1983), Farrel (1983: 39) identified three main components of such development: the generation of more wealth within a nation (economic development); the more equitable distribution of such wealth, or more equitable distribution of opportunity for



access to that wealth (social development); and the organization of political structures that would be close approximations to those prevalent in the West (political development). This study addresses the role of second component, social development, as one of the mechanisms that have led to the massive expansion of educational facilities and opportunities.

Not only are the elites in the developing nations under study obliged to press for economic growth, but they must do so within constraints imposed by notions of mass welfare and social equality. In the short run, at least, development strategies predicated on notions of social equality may well clash with those designed to achieve maximal economic growth. Tensions between egalitarian objectives and aspirations for economic advance are nowhere more evident than in the field of education, and several factors have conspired to make educational provision, in terms of both gross enrollments and differential access to education, one of the key political issues in the new states (Foster, 1977: 13). The elites in many of these countries have embarked on ambitious programs of educational expansion in the hope that provision of more schools and facilities would in

itself constitute the "royal road" to economic and social development (Foster, 1977: 13).

In the earlier stage of the decolonization and development process, it was believed that formal education was the major producer of upward social and economic mobility among the poor, and would produce greater social and economic equality (Adams, 1977). Massive enrollment in schools has resulted from the application of this view to educational policy. According to UNESCO (Education Sector Policy Paper, 1980), between 1960 and 1975 the number of children in schools in developing countries increased by 122%; the proportion of age-eligible children in primary schooling increased from 57% to 75%, with corresponding increases at the secondary level, 14% to 26%; and at the post-secondary level, the increase was from 1.5% to 4.4%. However, substantial inequalities in the distribution of schooling within most developing societies persisted, and in some cases increased in gravity. Urban children appeared to benefit more from the increased school provision than did rural children. In some plural societies, particular ethnic or tribal groups benefited more than others. Frequently, boys received more of the newly available schooling than girls. Newly opened schools, particularly at the relatively expensive

secondary and university levels, were predominantly occupied by children of the already well-to-do. Nonetheless, in recent years, much evidence (Bourdieu and Passeron, 1964; Jencks, 1972; Apple, 1979) has suggested that expansion of educational facilities is by no means a sufficient condition for growth, and it is evident that the relationship between economic and educational development is far more complex and multifaceted than had previously been assumed. However, governments of these new nations continue to pour resources into education in the expectation of an ultimate economic pay-off on their investment. Furthermore, from the viewpoint of the clientele of the schools, there can be little doubt that education is perceived as the key factor determining occupational placement and opportunities for social mobility. In industrialized states, there is still some evidence of controversy over the proximity of fit that exists between educational and occupational status, and some ambiguity surrounds the role played by schooling per se in facilitating the upward mobility of the individual. It has become increasingly popular to argue that education can have no significant equalizing or mobility-generating effect in a society that is characterized generally by a high degree of structured social inequality. It is seen

that even if children of the poor achieve a relatively high level of education, this will not ordinarily produce for the labor market the same benefits as those received by the children of the rich, because the labor market and the political system can be manipulated by the well-to-do to maintain advantages for their offsprings; and as educational systems have expanded more rapidly than economic sectors, there is increasing "educated unemployment," which has a greater negative effect on the children of the poor than on those of the rich (Farrel, 1982: 39). A fair summary of the existing evidence would suggest that, although the level of formal education may be the most important single factor associated with upward social mobility, its effect is less than the cumulative impact of other variables, including, among others, parental occupational status, regional origin, gender, ethnicity, political power, measured IQ, and even sheer personal drive and persistence. Nevertheless, in societies where rapid expansion in economies has occurred, such expansion may provide a variety of ancillary opportunities for mobility that are not entirely dependent upon the possession of a high level of formal education.

Particularly in new developing countries, the relatively small size of the modern sector of the economy and the fact that most occupational opportunities in the sector are controlled by public agencies, tend to place a premium on the possession of educational qualifications. Moreover, the combination of limited opportunities for salaried employment combined with a rapid expansion in the size of the outputs of educational systems tends rapidly to raise the minimal educational qualifications associated with a given occupational level. This situation in turn generates a new public demand for access to higher levels of education. As the occupational currency of a lower level of education declines, public pressure for parity of access to superior educational opportunities continues to mount. However, as the local economy grows and becomes more differentiated, it creates a variety of new job openings; with the weakest effect or absence of a traditional dominant class that can exploit all the new opportunities, formal education at higher levels becomes a predominant influence on the level of job acquired, and significant numbers of children from disadvantaged families use education to obtain access to the new positions. In many developing societies, even where the growth of the educational system has surpassed the growth of the economy, producing "educated unemployment,"

children often continue schooling as long as possible because the potential payoff and the possible avenues to economic success are high.

It is not uncommon, therefore, that the problem of "who gets educated" should be such a salient issue in the new states. Access to schooling, and more important, access to higher education, becomes a focus for individual and group conflict, whether it is perceived in terms of a rise in personal rank and monetary rewards, or whether it is seen as an instrument through which diverse ethnic or social groupings can achieve an enhancement of their collective status in the emerging social structure of the new states (Foster, 1983: 15). A country that expects to use public policy and public expenditure toward the elimination of inequality needs to know who receives which resources. Such knowledge is necessary if planning for redistribution with growth is to be successful.

In the past few years there has been a growing realization that in many societies education not only fails to contribute to social and economic growth but can actually impede it. Some of the principal defects of many education systems - their elitism, their failure to match the kinds of people they produce to the needs of the society in which they function and, perhaps most

fundamentally, their great resistance to change - combine to produce this effect. Such defects, too, reflect the broader social structures in which education systems function. There is no inevitability, however, that education systems should produce such outcomes; under appropriate conditions the function of education can change. An attempt to bring about such change is examined in the course of this study.

The problems of planning in education are seen to involve less the technical question of what changes need to be brought about than the political one of who shall benefit most from changes which are implemented. Given this fact, questions of the broader ends of social development and of social justice cannot be separated from questions of change in education. Whatever the direction of change, there is always a complex equation to be solved: who benefits?

The goal of this study is to determine whether children from lower social-economic classes are given equal opportunity in social mobility through education in one of the new developing nations: Malaysia.

### 1.3 CONTEXT OF THE STUDY

Adam Smith (1976) said, "No society can surely be flourished and happy, of which by far greater part of the numbers are poor and miserable." He was correct, particularly with reference to third world countries, where redistribution with growth, eradication of poverty, and socioeconomic equality are considered to be the ultimate objectives and priorities. Various developmental strategies, approaches and policies have been formulated to achieve these objectives, although their success has been questionable. In taking these approaches, the government decision-makers, development planners, and people of many diverse social classes, ethnic backgrounds and political persuasions have continued to share a faith in the efficacy of the formal education systems to alleviate economic poverty, to provide a meritocratic channel of socio-economic mobility for the lower classes, and to bring about a more equitable distribution of income and wealth in society.

Discussing the United States, for instance, Lester Thurow (1972:66) summarized the general and persistent advocacy of education in promoting economic equality as follows:

However much they may differ on other matters, the left, the center, and the right all affirm the



central importance of education as a means of solving our social problems, especially poverty. To be sure, they see the education system in starkly contrasting terms. The left argues that the inferior education of the poor and of the minorities reflects a discriminatory effort to prevent them from competing with better-educated groups, to force them into menial, low-income jobs. The right argues that the poor are poor because they have failed to work hard and get the education which is open to them. Moderates usually subscribe to some mixture of these arguments: The poor are poor because they have gotten bad educations, partly as a result of inadequately funded and therefore inferior school systems, but partly also as a result of sociological factors (e.g., disrupted families) that prevent poor children from absorbing the education that is available. Yet despite these differences, people at all points of the political spectrum agree that, if they were running the country, education policy would be the cornerstone of their effort to improve the condition of the poor and the minorities. If the poor or the minorities were better educated, they could get better jobs and higher income. This idea has had a profound influence on public policy in the last decade.

For developing countries within the orbit of the World Bank, McNamara's (1974) assessments of the performance of education in the developmental "Great Ascent" and his perceptions of education's contribution to development in the 1970's and beyond reflect continuing enthusiastic advocacy of education from one variant of the moderate view in Thurow's political spectrum. Blaming the persistent and intensifying problems of poverty and inequalities on "basically irrelevant development

strategies" and an "ill-conceived education system", McNamara continued to reaffirm his faith, and that of the World Bank, in the development potential of properly-conceived education systems. This faith is mirrored in the following three important questions guiding the World Bank educational policies and programs:

How can educational systems be reshaped to help the poorest segments of society? How can education contribute to rural development, and thus respond to the needs and aspirations of the vast majority of the poor living in the villages? How can educational opportunities be made more equal in order to promote social mobility in countries where educational systems have hitherto favored the urban dwellers and the relatively rich?

The basic assumptions of the above questions are that education can contribute synergistically to the reduction of inequalities, alleviate poverty, and improve social mobility if properly "reshaped" along with fresh and proper development strategies.

Directed at the ESCAP countries, of which Malaysia is a member, a United Nations document pointed out that "... it is hardly surprising that there has always been a strong tendency on the part of many planners concerned with greater socio-economic equality to look upon education as the great equalizer ..." (1977).

For Malaysia and its multi-ethnic society, the perceptions and expectations of the role and promises of

education in socio-economic development of the individual and the nation as a whole is no different, except for the fact that they may be more pronounced (Snodgrass, 1980: 10). The present democratically-elected government of Malaysia, which has been in power since the country gained political independence on August 31, 1957, has consistently stressed education as the main instrument for solving the problem of "nation-building": creating national unity out of a divisive society on the basis of a rapidly expanding modern economy providing special attention to economically lagging regions and social groups. The Malaysian Constitution states, "Education is the responsibility of the Federal Government and Parliament ... the right to education is one of the fundamental liberties ... All pupils receive equal treatment." The Constitution also emphasizes one major function of education, "to unite the various races together so that a united Malaysian nation will evolve" (Education Act, 1961, p. 2-3). The national economic development plans go further, to elaborate and emphasize the economic base for promoting national unity and social integration.

The Second Malaysia Plan (1971-75), underlined the role of education in furthering "the realization of the

full potential of the vast human resources of the country ...[to] contribute significantly towards promoting national unity ... play a vital role in increasing the productivity and income of all Malaysians." This authoritative document further adds, "... and above all, ensure the creation of a Malay commercial and industrial community in all categories and at all levels of operations, in order that within one generation Malays and other indigenous people can be full partners in the economic life of the nation" (Malaysia, 1971: 20). Recently, the Third Malaysia Plan (1976-80) gave greater emphasis and enthusiasm to education's potential for economic development and reduction of mass poverty:

The greater challenge will be that of producing the skilled manpower in the quantum and at the pace necessary for the achievements of Malaysia's targets in regard to agricultural modernization and industrial development. These targets are essential to the eradication of poverty ... The relative lack of education among the poor points to the vital role of education in the alleviation of poverty (Malaysia, 1976: 90).

In sum, from the Malaysian Government's perspective, education's role will be "vital" in promoting four interlinked national goals: (1) national unity, (2) reduction and eradication of poverty, (3) manpower development for rapid economic growth and socio-economic

equality, which includes (4) nurturing a new "community" of Malay entrepreneurs.

Since 1970, these four national goals have been literally enshrined in the National Constitution and the National Ideology. They are operationalized in the national economic development plans as the "New Economic Policy" (NEP) and the "Outline Perspective Plan" (OPP). The "two-pronged" NEP forms the official developmental goals discussed above:

National unity is the over-riding objective of the country. A stage has been reached in the nation's economy and social development where greater emphasis must be placed on social integration and more equitable distribution of income and opportunities for national unity and progress. This direction towards national unity is fundamental to the New Economic Policy ... a two-pronged New Economic Policy for development. The prong is to reduce and eventually eradicate poverty, by raising income levels and increasing employment opportunities for all Malaysians, irrespective of race. The second prong aims at accelerating the progress of restructuring Malaysian society to correct economic imbalance, so as to reduce and eventually eliminate the identification of race with economic function ... The NEP is based upon a rapidly expanding economy which offers increasing opportunities for all Malaysians as well as additional resources for development. Thus it is the implementation of this policy, the Government will ensure that no particular group will experience any loss or feel any sense of deprivation (Malaysia, 1971. p. 1).

This variant of a "Growth with Redistribution" development strategy adopted by the NEP is elaborated in

the OPP, which provides specific quantitative details and targets of these "two prongs" to be achieved within the time frame of about a generation, 1970-1990. For instance:

1. The Gross National Product (GNP) will grow within the twenty-year period at an average rate of 7% per year. Specific rates of growth have been targeted for the various economic sectors and industries.
2. Full employment will be attained by 1990. The unemployment rate will be reduced from 7.4% in 1970 to 3.6% in 1990, and this will be accomplished along with equalizing changes in the employment structure, occupational distribution, and worker productivity increases amongst different social groups.
3. The incidence of rural and urban poverty will be substantially reduced, from 58.7% to 23.0% in the case of the former, and from 21.0% to 9.1%, the latter, in 1990.
4. Economic inequality -- for example, the "imbalance in the distribution of ownership of share capital in limited companies -- will be notably corrected. The 1970 skewed ethnic distribution, with Malay interests, Chinese, and Foreigners owning 2.4%, 34.3%, and 63.0%, respectively of the total share of capital, will be evened to a more equitable distribution of 30:40:30 by 1990. (Malaysia, 1971).

To reiterate, the main point in the discussion above is that education is generally conceived as a vital instrument or independent variable susceptible to government policy manipulation to achieve certain desired redistribution outcomes, for instance, as those normatively defined in the NEP and projected in the OPP

for Peninsular Malaysia. They constitute the revealed preference function of the present government.

Like any other developing country, Malaysia is emphasizing heavy economic growth and development with specific strategies for eradicating poverty, achieving socioeconomic equality and equity, and narrowing the gaps in income inequalities and economic imbalance among its population. However, Malaysia has a delicate form of pluralist society in which almost all developmental policies are regarded as having ethnic connotations in one form or another, and in which ethnic consciousness is a glaring fact of everyday life in the country. This delicate form of pluralist society is derived from the composition of Malaysia's population: no single group forms an absolute majority (see Table 1.1). According to the 1980 population census in Peninsular Malaysia, Malays constitutes 53.9%, Chinese 34.9%, Indians 10.5% and others 0.7%. In Sabah and Sarawak, Malays and other indigenous people constitute 70% of the population. The nation's plurality stems not only from the proportions of its population (the number of Malays almost equals the number of non-Malays), but also from the fact that this ethnic division coincides with differences in religious beliefs, languages, customs, and ways of life. The differences are

further aggravated by the fact that the Malays are economically backward compared to the Chinese citizens, who are economically dominant.

The majority of Malays are peasants in the rural areas and they form the poorest section of the population. The vast majority of the poor, 86% in 1970, 75% in 1980 and 70% in 1985, live in rural areas. The incidence of poverty is the highest among Malays; nearly two-thirds of Malays are below the poverty line. The Malays' per-capita income is only half that of the Chinese, and two-thirds of the national average. Malay households accounted for about 85% of all households in the income range below M\$100 per month, whereas the shares of Chinese and Indian households in this income range were 9.6% and 4.9% respectively. The wide inequality of income among ethnic groups has its origin in the concentration of various races in different sectors of the economy and differences in their occupational positions in these sectors. The racial imbalance appears glaring when we observe employment by occupation. For example, within the managerial group in the manufacturing sector, only 7.0% were Malays in 1970, compared to 68% Chinese, 4.0% Indians and 18% foreigners.

In the higher earning professions in 1970, the Malays still accounted for a very small proportion compared to



the non-Malays: Malays accounted for only 4.3% of the architects in Malaysia, whereas 80.9% were Chinese and 1.4% were Indians. Among engineers, Malays accounted for 7.3%, compared to 71.0% Chinese and 13.5% Indians. Among medical doctors, Malays accounted for 3.7%, Chinese 44.8% and Indians 40.2%. Among accountants, 6.8% were Malays, while 65.4% were Chinese and 7.9% were Indians. Only 3.1% of dentists were Malays, while 89.1% were Chinese and 5.1% were Indians. In terms of ownership of share capital, in 1970 about 61.7% of the share capital of limited companies was foreign-owned. Malays owned 1.9%, Chinese 22.5%, and Indians 1.0%. This economic inequality and poverty have aggravated the racial dissatisfaction between the two groups. Since poverty in Malaysia is closely related to racial divisions, it may be necessary for the state to tackle the problems along ethnic lines. The bloody racial riots of May 13, 1969, between the Malays and the Chinese, were manifestations of the dangers of extreme economic imbalance along ethnic lines. In response to these problems, the state adopted the NEP in 1971 to eradicate poverty among all Malaysians and to restructure Malaysian society so that the identification of race with economic function and geographical location would be reduced and eventually eliminated. The overriding

objective of this policy is to achieve national unity and integration among the diverse population. The political leaders in the country maintain that as long as the vast majority of the population (who happened to be Malays) are poor, national unity and integration will never be achieved (Ibrahim Abu Shah, 1984). To the State, the widespread poverty among the Malays is the main obstacle to the achievement of national unity; thus all the factors that hinder the overall advancement of the Malays must be eliminated and opportunities for the Malays must be ensured (Ibrahim A. Shah 1984).

Table 1.1

## MALAYSIA: POPULATION DISTRIBUTION ('000)

## PENINSULAR MALAYSIA

ETHNIC GROUP	1980		1985		TOTAL
	URBAN	%	RURAL	%	
MALAYS	1,608.1	37.4	4,716.3	65.8	6,324.4
CHINESE	2,178.9	50.6	1,715.4	23.9	3,894.3
INDIANS	486.0	11.3	692.9	9.7	1,178.9
OTHERS	31.4	0.7	44.0	0.6	75.4
<b>TOTAL</b>	<b>4,304.4</b>	<b>100.0</b>	<b>7,168.6</b>	<b>100.0</b>	<b>11,473.0</b>

## 1985

MALAYS	2,199.7	41.3	5,125.9	67.1	7,325.6
CHINESE	2,516.4	47.2	1,732.0	22.7	4,248.4
INDIANS	570.9	10.7	741.0	9.7	1,311.9
OTHERS	39.4	0.8	43.5	0.5	82.9
<b>TOTAL</b>	<b>5,326.4</b>	<b>100.0</b>	<b>7,642.4</b>	<b>100.0</b>	<b>12,968.8</b>

SARAWAK	1980		1985	
		%		%
<b>MALAYS &amp; OTHER</b>				
INDIGENOUS	939.8	69.6	1,080.0	70.1
CHINESE	394.7	29.2	442.9	28.7
INDIANS	3.4	0.2	4.0	0.2
OTHERS	13.2	1.0	15.1	1.0
<b>TOTAL</b>	<b>1,351.1</b>	<b>100.0</b>	<b>1,542.0</b>	<b>100.0</b>

Table 1.1 (Continued)

ETHNIC GROUP SABAH	URBAN 1980	%	RURAL 1985	%
MALAYS & OTHER				
INDIGENOUS	874.6	82.9	1,077.0	84.2
CHINESE	171.1	16.2	191.0	14.9
INDIANS	5.9	0.6	7.2	0.6
OTHERS	3.5	0.3	4.3	0.3
TOTAL	1,055.1	100.0	1,279.5	100.0

Note: Distribution of population to urban-rural in Sabah and Sarawak is not available.

Source: The Third Malaysia Plan, 1981 - 1985.

In restructuring the society, for example, the NEP covers three principal areas: employment by sector, employment by occupation, and ownership of the share capital in limited companies. The targets for employment by sector as well as by occupation call for a pattern of employment that more closely reflects the racial composition of the population.

There is one area of inequality that can be effectively ameliorated: the area of higher education. Since university students are relatively few (2.2% in

1984), compared to elementary (94.4% in 1984) and secondary students (47.7% in 1984), and since they turn over more frequently than job holders or owners of firms, their ethnic composition can be altered more quickly. Moreover, the state has monopolistic control of the university's selection system, whereas intervention in employment and new ownership must be enforced through private as well as various public organizations. One would therefore expect intervention strategies in the form of ethnic quotas to affect inequalities in higher education more rapidly than inequalities in employment and ownership. An improvement in the allocation of admissions to Malay students at higher educational institutions may translate into relative income gain over the next decade (Klitgaard and Katz, 1983: 340). Thus, the educational intervention strategy seems the most practical for the state to use to ameliorate the racial inequality in the country (Ibrahim Abu Shah, 1984: 15).

It is widely accepted that the lack of education is indeed both a symptom and a major cause of poverty. According to the report of the Third Malaysia Plan (1976-1980):

Data on household income and educational attainment show that there is a close association between poverty and educational attainment. The majority of the poor have low levels of

educational attainment which restrict their access to productive employment opportunities.

With the launching of the NEP in 1973, the state attempted to rectify the imbalance through the avenue of education out of the belief that "... education is seen as one of the most powerful measures" (Second Malaysia Plan 1971-1975, 1971: 236-237). This interventionist posture takes various forms, which include the establishment of special residential science secondary schools and MARA Junior Science College, pre-university science programs (Matriculation program), and imposition of admission quotas in universities for various ethnic groups. The first two measures are exclusively for the Malays and peoples from Sabah and Sarawak, to prepare them for higher studies in the fields of science and technology. The latter measure involves a deliberate policy of granting more places at various tertiary institutions to the Malays and other indigenous groups from Sabah and Sarawak. These various measures represent a significant shift in policy, from one emphasizing efficiency to one giving greater weight to equity. In the past, before the advent of the NEP, admission into universities was based on merit irrespective of race; the attendant problem was under-representation of Malays,

particularly in the fields of science and technology. Now admission is based on proportional ethnic representation in all institutions of higher learning and in the various fields of study. The State hopes that through this shift in policy, Malay representation in the various professions requiring basic university degrees or professional qualifications will be substantially increased, thus making up for lost ground due to past neglect by the colonial state and to a certain extent, by the post-colonial state up to 1969. Thus, higher education has been assigned the crucial role of restructuring the ethnic composition of the class of managers, executives, professionals and other high income earning categories that for a long time were dominated by the non-indigenous sections of the Malaysian population.

Is education really such a vital determinant, "the great equalizer," and a powerful governmental policy-instrument to promote economic growth and equity? What are the possible serious limiting factors that could operate to constrain such an effect of education?

#### 1.4 THE PURPOSE OF THE STUDY

In light of the questions raised above, this study examines an issue specific to Malaysia: the role of education as an important determinant and policy variable for the reduction of social and economic inequality in Malay society. Malay, in this study, refers to the indigenous people in the Peninsular of Malaysia and the Malay community in Sabah and Sarawak (see Table 1.1).

This study also highlights the importance of the state in this scenario. "The state," briefly defined, includes the structures and functions mainly of the executive, the legislature, and the judiciary. This study is concerned with the educational activities of the state. We argue that the state -- through the "state output" of policies and programs -- constitutes the primary determinant of the patterns and trends of social development. These state outputs have substantial effects on the functioning of such major distributive processes as the education system, the labor market system, and wealth distribution mechanisms (The New Economic Policy, 1971).

Since the May 13, 1969 racial riots, overcoming ethnic inequalities has been considered the key to Malaysia's political, economic and social development and stability. Since the Malays and other indigenous peoples



of Sabah and Sarawak are underrepresented in the higher earning jobs and professions, and since only through such preferential policies as intervention strategies in higher education can this ethnic inequality be effectively and quickly ameliorated, this study is concerned with the role of state intervention strategies in the selection of Malay and other indigenous students in local universities. For this reason, the study will focus on the graduates of the Universiti Sains Malaysia (University of Science, Malaysia).

Through preferential policy at the Universiti Sains Malaysia and other higher educational institutions, the state has demonstrated some success in implementing intervention strategies and in restructuring Malaysian society by spawning a Malay class of professionals, managers, executives, public administrators and other high income earning categories (Ibrahim Abu Shah, 1984). However, a major issue this study seeks to elaborate, and one which has serious implication for intra-Malay competition, is the question of the relationship between higher educational expansion, in this case educational allocation under the preferential policy, and the equalization of educational opportunity within Malay society.

Specifically, we seek to examine these issues:

THE PREFERENTIAL POLICY IN HIGHER EDUCATION

INTENTIONS

IMPLICATIONS

1. COMPOSITION OF MALAY STUDENT POPULATION

- |  |  |
|--|--|
| <p>1.1 to ensure as far as possible that the composition of the student population in the university as a whole and each of its faculties should reflect the racial composition in the country.<br/>(The Majid Report, 1971: 44)</p> | <p>1.1 What is the proportion of the composition of Malay students in the university and each of its faculties with the racial composition in the country?</p> |
|--|--|

2. THE TARGET GROUP

- |   |   |
|---|---|
| <p>2.1 to admit Malay students from rural areas.<br/>(The Majid Report, 1971: 45)</p>   | <p>2.1 What is the proportion of Malay student residential origins with the Malay student population.</p>                 |
| <p>2.2 [to] narrow the gap in educational opportunities between the rich and the poor (Malays).<br/>(Third Malaysia Plan, 1976: 391).</p>                       | <p>2.2 What is the proportion of Malay parental socioeconomic status with Malay student population in the university.</p> |
| <p>2.3 Improving opportunities for higher educational attainments among (Malay) youths from disadvantaged groups.<br/>(The Cabinet Committee Report, 1979).</p> |   |

3. EDUCATIONAL EMPHASIS

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| <p>3.1 to give greater access</p> | <p>3.1 What is the proportion</p> |
|-----------------------------------|-----------------------------------|

to increasing number of school leaving Malay students in science based faculties. (The Majid Report, 1971: 129).

of distribution of Malay students in science based faculties in the university with the non-science based faculties.

#### 4. EDUCATIONAL ASSISTANCE PROGRAMS

4.1 [Malay] students who come from rural areas where the facilities for the study of science are limited, should be given special assistance. (The Majid Report, 1971: 45).

4.1 What is the proportion of rural Malay student population in the university with the Special Residential Schools.

4.2 to establish pre-medic, pre-science and pre-engineering courses to assist students from rural areas. (The Majid Report, 1971: 128).

4.2 What is the proportion of rural Malay student population with the pre-university preparatory program - the matriculation.

#### 5. MANPOWER NEEDS

5.1 orientation and expansion of the education and training system towards meeting manpower needs, especially in science and technology. (Third Malaysia Plan, 1976: 391).

5.1 What is the proportion of socioeconomic status of Malay graduates with their occupational entries.

### 1.5 THE CASE STUDY

The viability of the case study method, which is employed in this research, has been demonstrated by many, such as Baldrige (1972) and Meek (1982), in their studies of New York University and the University of Papua New Guinea, respectively. The case study method is seen as useful when one is interested in the complexities of multiple inter-relationships rather than typicality; while it is not generalizable in a statistical sense, it allows one to raise questions about other generalizations, such as equality in representation. Thus, the evidence reported has of necessity to be treated as being illustrative rather than statistically valid (Gopinathan, 1984: 8).

Baldrige cites three other reasons why a case study is appropriate for some types of study. One is that the case study is the classical method of researchers interested in depth of study, for this method allows many different techniques to be applied in the same situation. He maintains that the goal of comprehensiveness allows the researcher in the field setting to capitalize on a variety of research techniques -- for instance, interviews, participant observation and the study of documents -- and

to alter the orientation of his study as new knowledge and insights are gained about the community.

A second useful characteristic of the case study method is that it allows the researcher to generate a holistic picture of the community under observation. This necessarily implies the need to call upon a variety of theoretical perspectives and methodological tools so that the complexities of the multiple relationships may be fully observed and their contributions to the processes better established.

Third, Baldrige notes the usefulness of the case study approach in exploring the processes of an organization. He says, "Official structure and official documents hide a wild, informal and dynamic set of processes that can be understood only by participation, observation and in-depth interviews. The case study executed in the field in the midst of an on-going process has distinct advantages to anyone who is concerned with dynamics and change" (Baldrige, 1977: 32).

The case study presented here is similar to those of both Baldrige and Meek, in that all deal with one university setting. However, this study differs from theirs in that it is a longitudinal study. This study focuses on all Malay graduates of the University of

Science, Malaysia, graduation classes of 1982 to 1988, that was made available by the Admission and Record Division (see Table 1.2). These groups of 3,784 students represent the post-independent Malay generation who were directly affected by the developments in state educational policy. They were born between 1959 to 1966, entered elementary school between 1965 to 1976, attended lower and upper secondary school between 1971 to 1983, and obtained pre-university education between 1978 to 1985. These groups of students represent the products of state educational policy since independence in 1957. Moreover, a longitudinal study will provide in-depth treatment of the subject under study.

Table 1.2  
SUBJECTS OF THE STUDY

I. BACKGROUND

<u>YEAR/ PERIOD</u>	<u>SIGNIFICANCE</u>
1959 - 1966	Born
1965 - 1972	Elementary school
1971 - 1978	Lower secondary school
1974 - 1981	Upper secondary school
1976 - 1983	Pre-university classes (Form Six or Matriculation Program).

---

II. UNIVERSITY EDUCATION

<u>GRADUATION</u>	<u>NO. OF GRADUATES</u>	<u>%</u>
1982	414	10.9
1983	465	12.3
1984	507	13.4
1985	478	12.6
1986	551	14.6
1987	649	17.2
1988	720	19.0
<u>TOTAL</u>	<u>3,784</u>	<u>100.0</u>

## 1.6 SOURCE OF DATA

Data for this study was obtained from two sources: documents and interviews. Information on the students was gathered from students' personal files and university records which were provided by the Admission and Record Division, the Registry, Universiti Sains Malaysia. Additional information was gathered from records of the Ministry of Education and the Department of Public Services. Data on policy and its implementation was gathered from policy documents of the University and the Ministry of Education, and from interviews with university officials.

The compilation of data was done in May to July, 1988, after receiving approval from the office of the Vice-Chancellor of the University of Science, Malaysia.

## 1.7 DATA ORGANIZATION

Equality of educational opportunity under the preferential policy in higher education is measured in this study as a student's chances for attending an equal amount of education and occupation. One major contribution of the study is that, in using differences of parental occupations, parental socioeconomic status, place of



residence, student's previous schools, student's entry qualifications, student's fields of study, financial assistance, and occupational opportunities, the differences in educational equality within the Malay community is broken out for comparison. Tables procedure under the SPSS-X, that simplifies the production of crosstabulations, frequency counts and statistical breakdown is adopted in the data analysis of the study.

Our analysis is based on the data of the total population of the Malay graduates cohort (3784 graduates) of the graduating classes 1982 to 1988. The data is organized into eleven variables and each variable is categorized into sub-categories.

VARIABLE 1 represents the year of convocation, from 1980 (code 1) to 1988 (code 7).

VARIABLE 2 is for gender category i.e., Male (code 1) and Female (code 2).

VARIABLE 3 shows the distribution of the graduates in 14 academic schools, i.e., Natural Sciences (code 1); Science Education (code 2); Applied Science (code 3); Science Pharmacy (code 4); Housing, Building and Planning (code 5); Humanities (code 6); Humanities Education (code 7); Social Science (code 8); Medical Science (code 9);

Computer Science (code 10); Engineering (code 11); Communication (code 12); Management (code 13); and Industrial Technology (code 14).

VARIABLE 4 represents graduates' previous schools, which are sub-categorized to government Residential (code 1), government Non-residential (code 2), and private schools (code 3). In cases where information is unavailable, code 0 is assigned to.

VARIABLE 5 shows the types of academic qualification at admission to the university. Higher School Certificate of Examination (STPM) carries code 1; Matriculation students, code 2; other types of qualification such as diplomas, code 3; and off-campus program, code 4. Code 0 is for unavailable information .

VARIABLE 6 is for the types of graduates' parental occupations. Based on the Dictionary of Occupational Classification, Malaysia (Malaysia, 1968, Ministry of Labor), graduates' parental occupations are classified into 15 categories: Managerial and Professionals (code 1); Administrative - High (code 2); Teaching (code 3); Business (code 4); Pensioner (code 5); Police personnel (code 6); Armed Force (code 7); Clerical and services (code 8); Administrative - Low (code 9); Land-settlers (code 10); Rice-cultivators (code 11); Rubber-tappers

(code 12) Fishermen (code 13); Farmers (code 14); and Laborers (code 15). Code 0 is assigned to unavailable information.

VARIABLE 7 represents categorization of graduates' parental occupations into high, middle and low socio-economic status. The categorization is based on Wilson's scale, adopted in the 1972 Malaysian Dropout Survey, and the Dictionary of Occupational Classification, Malaysia (Malaysia, 1968, the Ministry of Labor). High status, code 1 represents professional, managerial, administrative-high and teaching. Middle status, code 2 includes business, pensioners, police, armed forces, clerical, services and administrative-low. Low status, code 3 involves those in land-settlement, rice-cultivation, rubber-tapping, fishing, farming and labor.

VARIABLE 8 categorizes places of residence into urban (code 1) and rural areas (code 2). Urban areas are those with 10,000 population or more with electricity and water supply and metal roads. Categorization of places of residence into urban and rural is derived from subjects' residential addresses in their personal files .

VARIABLE 9 represents the distribution of the subjects in the various 14 states in Malaysia. Generally, each state has experienced different rate of development, this

variable categorizes these states into developed states such as Kuala Lumpur (code 1); Selangor (code 2); Perak (code 3); Pulau Pinang (code 4); Johor (code 5); Negeri Sembilan (code 6); and Melaka (code 7); and into less developed states such as Pahang (code 8); Kedah (code 9); Perlis (code 10); Kelantan (code 11); Trengganu (code 12); Sabah (code 13); and Sarawak (code 14).

VARIABLE 10 covers the year of admission of subject at the university. The year ranges from 1973 (code 1) to 1985 (code 13) .

VARIABLE 11 represents the types of financial assistance received by the subjects. The assistance is categorized into scholarships (code 1) and loan (code 2). Subjects who are without financial assistance are given code 3, while those with unavailable information are given code 0.

## 1.8 SIGNIFICANCE OF THE STUDY

On the eve of the expiration date of the New Economic Policy by the year 1990, the importance of education, particularly higher education, in ameliorating the glaring ethnic inequality in Malaysia, is considered critical. Equally important is the question of its impact within the Malay ethnic group itself. Therefore, this longitudinal

study of education admissions of Malay students will provide insights into general mobility processes and can shed light on the characteristics of potential elites. By empirically testing the arguments made by supporters and opponents of the educational reforms, this study will help determine whether equality of opportunity is provided by the state's intervention strategies.

The findings of the study, thus, have important policy implications. If, for instance, it is found that considerable inequalities exist, and the state wants to correct them, the present study may aid policy makers in formulating appropriate procedures or policies. On the other hand, if this study provides evidence of equality of opportunity, policy makers and implementers can use it to improve their strategies. Furthermore, if the results indicate that social and geographical disparities in education do not exist, or that they are relatively small, the study may prevent the continuation of unjustifiable criticism.

Finally, the proposed study will represent a valuable addition to the body of literature in this area. It may provide additional information for education planners and administrators in formulating academic and non-academic activities. It may also encourage further research into

the important area of state intervention strategies in educational selection in Malaysian higher educational institutions by providing a basis for more follow-up studies of the same sample and for other studies in order to determine the factors which account for social-class variations in the student body.

#### 1.9 LIMITATIONS OF THE STUDY

This study will not address the effects on Malay students in all higher educational institutions in Malaysia of the state's intervention strategies. It will focus on Malay students only at the University of Science, Malaysia graduated from 1982 to 1988. The data used in this study will be limited to those obtained from University of Science, Malaysia's students' personal files and university documents, other official documents, newspapers and interviews.

Another important observation is that the principal source data - the students personal files - are not adequately documented. Important information, such as previous schools, parent occupations, qualifications at entry and some home addresses, is often not included. In addition, student data and files are classified under

year-of-graduation and not under year-of-admission. It is the university policy that all students need to fulfill eight full semesters (four years), and must not exceed fourteen semesters (seven years) for undergraduate studies. Therefore, students' personal files are often shifted every semester to correspond to the year of possible graduation. In this study, the year of graduation, rather than the year of admission, is taken as the period of study.

Malay Special Rights, which include preferential treatment in higher educational institutions, come under the Constitution (Amendment) Bill - the Sedition Act of 1977, which makes it an offense to discuss publicly "sensitive racial issues" and also removes parliamentary privilege in regard to the discussion of these topics at both federal and state levels. Thus, the greatest limitation in this study is that of obtaining access to people in charge of this program for interviews. However, in most cases these individuals were willing to discuss the issues under study with the promise not to quote them as the source of information.

It was not possible for the researcher to study the effects of the selection process under state intervention strategies in other Malaysian universities. Such broader

study was prohibited by time constraints, and by the larger number of students. The University of Science, Malaysia cannot be labelled as "typical" of all Malaysian universities, since each is different in its individual involvement with its development and history. In an important way, each university is unique and generalizations beyond the examined case become speculative. However, The University of Science, Malaysia may be fairly regarded as "representative" of Malaysian universities, because of its multiethnic student population and financial support and policy, coordinated by the Ministry of Education, are common to all universities in the nation.

## 1.10 LITERATURE REVIEW

### 1.10.1 EDUCATION AND MOBILITY

Education has been studied extensively in many developed and developing countries in the past decades in order to evaluate the role of formal education in social mobility, and in post-education status attainment. A crucial question addressed by this study is the role of formal education in the equalization of life chances. Does



formal education reinforce existing inequalities in opportunities to obtain the most desirable socioeconomic status in society by favoring students with high social origin and penalizing those from disadvantaged backgrounds? Or does it aid in diminishing equalities by making it possible for capable youths from the lower socioeconomic groups to reach the highest level of education, and thus, eventually to enter high level occupations?

One reason for examining the provision of equality of educational opportunity has been a great concern about the utilization of talent. It was argued in the 1950's and 1960's by social scientists and policy makers that a society, in order to meet the changing needs for manpower created by modernization and industrialization, and in order to continue to progress, must make better use of the existing "pool of ability." This notion led to the undertaking of a number of studies aimed at the extent to which available talents have been utilized in various countries (e.g., Clark, B.R., 1962; Clignet, R.P. and P. Foster, 1964; Floud, J., 1961; Foster, P., 1963, 1965 and 1977; Halsey, A.H., 1961; Husen, T., 1961 and 1979; McIntoch, D.M., 1959). If the talent of a country is to be more fully utilized, it was posited, existing obstacles,

which prevent talented lower socioeconomic class students from gaining access to and attaining the level of education which their ability allowed, must be eliminated.

The belief that equality of educational opportunity is an ideal which societies must strive to achieve has been another motivating force in the investigation of whether educational systems have been providing equal chances to all. It has been widely accepted that a desirable society is one in which only "ability" and "talent" determine the level which an individual can achieve within the educational hierarchy and later in the occupational hierarchy. Ascriptive criteria such as sex, region, socioeconomic level of parents, and ethnicity should be neither an advantage nor a hindrance to one's career.

A review of the existing literature on different societies reveals that educational differences or achievements are closely linked to systems of social stratification. The linkage between education and social stratification has been pursued by social scientists along different lines of theoretical inquiry. The first is the hypothesis that social stratification serves to distribute educational opportunity unevenly, reflecting the stratification of socioeconomic background or parental

status. This hypothesis explores the function of education as a social institution which reproduces successive generations of high socioeconomic status families with high educational achievements, and low socioeconomic groups with little or low educational performance. The second hypothesis is that education serves as a significant catalyst for social mobility. More education means greater opportunity for the under-privileged to obtain better income earning jobs. The assumption is that education is an effective mechanism for pulling poor children out of disadvantaged situations, or for breaking the vicious circle of poverty.

In the large body of literature on educational opportunity and social mobility, many theories have been propounded on the relationship between these phenomena. These theories can be generally classified into two groups:

- a) Conventional or liberal, arguing for the role of education in promoting social mobility and reducing poverty.
- b) Revisionist, challenging the role of education in social mobility and poverty reduction.

In open societies, there are several avenues by which individuals can ascend the social ladder of distinction. These include wealth inheritance, marriage and education. Of these, education is the most sought after, and for good reasons. Of all the avenues available, education is relatively more accessible, particularly with the democratization of educational opportunities since the end of World War Two. What is even more important is the high correlation found between level of educational attainment and occupational level in many societies.

The early proponents of conventional theories, such as Lipset and Bendix (1967), showed the significance of education for upward social mobility. The evidence from a survey in the United States in 1950 indicates that working class children who have completed college are almost certain to move into non-manual, presumably fairly high status occupations, and that education does provide the avenue for social mobility in industrial societies. Hummelweit and Swift (1969), in their longitudinal study have also shown that education rather than the home affected the individual's subsequent occupational history, job level and aspirations. Blau and Duncan (1967), in their empirical study in the United States, showed that education has provided the disadvantaged low strata with

outstanding opportunities for upward mobility. The authors indicate that education has exerted more influence on one's success than one's social origins. That education tends to foster social mobility is also indicated by Havighurst (1971), based on his study in four societies - the United States, Britain, Australia and Brazil. Havighurst showed that there has been a great deal of social mobility in industrial society, and that each country has made different use of education in relation to mobility, depending upon the level of industrialization. The United States has made greater use of education to promote upward mobility than have other countries (Havighurst, 1971: 116-118). In a more recent study, Featherman and Hauser (1978: 481) conclude that "... the mobility inducing effects of education are manifestly stronger than in the past."

Tumin and Feldman (1961) found this to be true for Puerto Rico, where the higher the level of educational attainment achieved by an individual, the better the job one steps into, and hence the higher the income one earns. From this study, they conclude that "... education opens up the class structure and keeps it fluid, permitting considerably more circulation through class positions than would otherwise be possible" (Ibid, p.44). In Japan,

Woronoff (1981) found that education has been regarded "... as the primary means of individual self-improvement and raising the nation's overall level. Schools are the major, and almost sole, providing grounds for young people. Although money or birth are precious assets, they do not usually determine their status anywhere near as much as education." The policy implication of the findings of Tumin and Woronoff, and those of sociologists who argue that vertical social mobility is highly dependent upon the level of formal education attained, is that formal educational opportunities should be expanded and made more readily accessible to all, particularly the poor, if we desire a more egalitarian society. It is hoped that through the democratization of the educational system, students of poor class origins will have an equal opportunity to pursue education up to its highest level and subsequently earn equal access to upward mobility. By diligence and the attainment of high academic credentials, so the argument goes, children from peasant and working class backgrounds can have access to better paying jobs that would lift them out of poverty.

This idea has won the acceptance of many international agencies, such as the World Bank (1971) and the Economic and Social Commission for Asia and the

Pacific (ESCAP). The World Bank's faith in education has promoted its reaffirmed belief in a well-planned and relevant education system as a potential contributor to development. In a document directed at its member countries, ESCAP (1977) pointed out that "... it is hardly surprising that there has always been a strong tendency on the part of many planners concerned with greater socio-economic equality to look upon education as the great equalizer ..." (p.72).

There are, however, many recent contradictory findings on the contribution of education to vertical social mobility. Scepticism has been voiced by scholars. Anderson (1961) notes that education is not so significant in influencing vertical social mobility. He stresses that ability and associated motivation, varying independently of schooling, play a powerful role in generating social mobility. Thurow (1972) also refutes the view that education is a powerful tool for altering the distribution of income in society. He claims that the gap in years of schooling between the top and the bottom fifth of the income distribution of the population in the United States (1950-1970) has decreased, but their shares of the national income have become more unequal. He concludes that education as a cure for socio-economic problems is

ineffective. Jencks (1972) claims that equalizing educational opportunity does not reduce socio-economic inequality. He asserts that direct measures are needed to equalize income distribution. Based on his empirical evidence, he argues that education had failed to equalize both school achievement and adult income.

Blau and Duncan (1967), in their study, have concluded that in a highly complex and developed society such as the United States, education is not primary and that social origins play a crucial role in determining an individual's placement in the occupational structure. Thus, the authors show that in societies in which income and wealth distribution are extremely skewed in favor of the rich, education tends to stabilize the status positions of individuals across generations although limited vertical social mobility through education is still possible. Bowles (1976), Bourdieu (1974), Bourdieu and Passeron (1964), and Carnoy (1974), argue that schools were set up by and function to serve the interests of the higher socioeconomic strata in western and many developing societies. Selection according to social class and differential inculcation of personality traits are the assumed means of perpetuation and preservation of the existing social order.



Emphasis on the provision of equal educational opportunities has been coupled with interest in the importance of schooling in the eventual attainments of individuals. Disparities within the school system have been considered to be of grave importance, because formal education has been believed to significantly influence how far one will go after completing it. Sewel (1971), for example, indicates that in the United States, in order to enter an increasingly greater number of occupations, one needs university education, "for those who fail will be severely disadvantaged in the competition." Jencks' findings (1972) indicate that each extra year of elementary or secondary school is associated with a 6% increase in income, each year of college with a 12% increase, and each year of graduate school with 7% increase. Olneck (1976) similarly reports that the increment in income associated with four years of college is proportionately greater than the increase associated with four years of high school.

To say that all educational systems are selective is to state the obvious. All formal systems have mechanisms which result in the early elimination of a number of students from schools so that only a relatively small number of those who enter attain the highest levels.

Thus, a great number of students stop attending schools at the end of a cycle, or some of those who decide to continue enter those branches from which chances of reaching even higher levels of schooling are limited. Attending inferior branches or tracks results in the students' remaining disadvantaged. Bourdieu and Passeron (1964) declare that those who are eliminated or who enter inferior tracks are members of the lower social groups. This is a mechanism whereby social class positions are perpetuated across generations through the educational system.

The phenomenon of unequal educational opportunity based on social origin is not uncommon in most western societies. The extensive work of Halsey and Floud (1961) in England clearly showed there exists a close relationship between the occupations of pupils' fathers and pupils' staying in schools and obtaining places in the most prestigious types of educational institutions. Findings from France (Girard, 1963, and Bourdieu, 1979) and data from Poland and Spain (Meyer, Tuma and Zagorski, 1979; Nicholas, 1975) show that access to higher levels of schooling and to the superior branches and tracks of schools have been dependent, to an extent, on the occupational category of the youths' fathers. In the

United States, the chances that individuals will enter and continue in the educational system are different for students with different socioeconomic origins; that those from the higher social levels are more advantaged has been amply documented (Sewel, 1971; Jencks, 1972; Bowles and Gintis, 1975; Kerckhoff, 1974). Zikopolous (1982), drawing from educational data from Greece (Lambiri-Dimaki, 1974; OECD and Greek Center for Social Research, 1976; and Kazamias and Psacharopoulos, 1978), reported similar results: the rate of admission into the universities was the lowest among students whose parents were employed in the agricultural sector and had not completed the six-year gymnasium, and highest among students whose parents had professional occupations and post-secondary education (p. 46-47).

There are few studies on the relationship between social background and education in third world countries. However, the findings of studies that have been undertaken are somewhat similar. Isahak (1977), quoting a production function study of elementary education in Thailand by Fuller (1976), reports a low standardized regression of 0.18 for the contribution of students' socio-economic status to their educational achievement. Elliot (1975), studying the patterns of poverty in the third world, found

that social background had little effect on educational performance. Allman (1979), in his study on "Social Mobility, Education and Development" in Tunisia, found a low correlation (0.21) between respondents' education and income and fathers' social backgrounds. He came to the conclusion that "... education is playing an increasingly important role in determining upward social mobility in Tunisian society" (p. 151).

On the other hand, some studies of the third world countries show that education reproduces the state of social inequality. Fields (1975), in his study on "Higher Education and Income Distribution in Less Developing Countries," concludes that "... Kenya's higher education system is found to be inequitable inter-generationally, since the few who are favored are disproportionately the children of the well-to-do, whether measured by income, class, or various indices of socioeconomic status" (p. 256-7). Similar findings are indicated by Mani (1980) for Indonesia, where fathers' education and occupation are significantly related to university admission and academic achievements of their children. In 1981, percentages of students attending the University of Indonesia who were offsprings of different social backgrounds were: farmers, fishermen and workers, 4%; private business and

professionals, 32%; military and government officials, 41%; and retired and others, 24% (Elliot, 1975: calculated from chapter 9). In 1979, students admitted to the University of the Philippines were disproportionately members of the upper class( 58%), compared to 4.2% of the poor (Klitgaard, 1986, Table 6). Elliot found that in Ghana in 1970, 34% of children from upper professional groups were enrolled in top-quality secondary schools, and only 20% of farmers' children and 19% of blue-collar workers' children were enrolled in such schools (Elliot, 1975:243).

Bhagwati (1973), in his investigation of the behavior of the state (India) in the education sector, stresses the important linkage between educational policy and programs and the class structure of Indian society. Bhagwati's approach consists of the following propositions:

- (1) that the pattern of governmental budgetary support of education will reflect the class structure;
- (2) that the classes which benefit most from any educational provision will be the higher income classes;
- (3) that the income levels of the recipients of state subsidies via educational provision will be much

- more for those participating in higher education than for those enrolled in primary education;
- (4) that, therefore, the rate of subsidization will be greater for higher education than for primary education, given the political dominance of the upper income groups in general.

The above hypothesis basically draws inspiration from Bowles' seminal ideas on capitalist development and the educational structure in developing countries. This hypothesis substantively extends and refines Bowles' argument that given the nature of the class structure and its effects on state actions in developing countries following the capitalist mode of economic development, the masses will benefit only from primary education, whereas most of the gains in higher education will tend to be reaped by the elite classes. In this study, Bhagwati theorizes that "... the State (in capitalist LDCs) will subsidize the cost of education; the benefits of these subsidies will accrue disproportionately less to the poorer groups at each level of education; the higher the educational level considered, the higher will be the average income-level of the groups to which the students belong" (p. 24-25).

### 1.10.2 EMPIRICAL EVIDENCE: MALAYSIA

In Malaysia, a variety of studies based on macro-national or regional surveys and micro-community anthropological surveys have been undertaken in the past decade. They have provided valuable data, findings and interpretations to throw light on the issue of differential benefits to different socioeconomic groups with respect to the state's activities in education. Meerman's (1979) study for the World Bank is the most comprehensive, for it covers the whole of Peninsular Malaysia and includes all levels within the formal educational system. Meerman employed what he terms "inductive" research, in which he first developed two sets of data. The first was obtained from official documents giving data on costs and types of government output such, as years of schooling. The second data-set was derived from a sample survey of the utilization of the educational output, for instance, by the households. The two sets of survey and cost data were analyzed together to give the estimate of per household government spending for 1974. From this study, Meerman found that at all the three levels of education -- primary, secondary and post-secondary -- enrollment ratios increase directly with family income. From Table 1.3, we observe that the

differences in enrollment rate between the bottom two quintiles and the top two quintiles of household per capita income (HPCI) are more pronounced at the secondary, and even more so at the post-secondary level. The enrollment ratio of the top quintile at the post secondary level is almost eight times that of the bottom quintile. A closer examination of the table also reveals that while the actual enrollment of the bottom two quintiles of HPCI is less than the norm at all levels of education, the actual enrollment of the top quintile equals the norm at the primary level and exceeds the norm at both the secondary and post-secondary levels. That children from rich households have greater access to education, particularly at the post-secondary level, which in Meerman's study refers to education at the universities, polytechnics and teacher-training colleges, is revealed by the column on discrepancy between the actual number of students per household in the post-secondary level and the norm. For all HPCI except the highest, actual enrollment is less than the norm. Clearly, effective demand at each educational level, particularly as one moves to the upper steps of the educational ladder, is therefore a positive function of income (P. 108).



In 1972, the Ministry of Education oversaw a Dropout Study -- a macro-data set of 10,500 youths -- with the objective of determining the causes of school leaving among primary and lower secondary school students, and of recommending ways to improve the school retention rates. The major findings tend to confirm generally held beliefs about the direct relationship between the socioeconomic backgrounds of students and their rates of enrollment at schools. It is stated that:

"It has often been postulated that the rates of enrollment are affected by the prosperity of parents. The more wealthy the parents, the longer the child stays in school, and the converse, the less wealthy the parents, the more likely the child to dropout of school. In short, enrollment is affected by the relative financial capacity of the parents ... (p. 6).

Table 1.3

NUMBERS IN AGE COHORT PER HOUSEHOLD, STUDENTS PER HOUSEHOLD IN ASSISTED SCHOOLS, ACTUAL AND NORM, BY EDUCATIONAL LEVEL AND QUINTILE OF HOUSEHOLD PER CAPITA INCOME

Quintile	Age Cohort	Enrolled	Enrollment Rate	Norm	Discrepancy
PRIMARY LEVEL					
Quintile					
1	1.61	1.37	0.85	1.45	-0.08
2	1.25	1.08	0.86	1.13	-0.05
3	1.14	1.06	0.93	1.03	0.03
4	0.90	0.89	0.99	0.81	0.08
5	0.51	0.46	0.90	0.46	0.00
Mean	1.04	0.94	0.90	0.94	0.00
SECONDARY LEVEL					
Quintile					
1	1.14	0.38	0.33	0.46	-0.08
2	1.20	0.40	0.33	0.48	-0.08
3	1.19	0.48	0.40	0.48	0.00
4	0.87	0.38	0.44	0.35	0.03
5	0.75	0.36	0.48	0.30	0.06
Mean	1.00	0.40	0.40	0.40	0.00
POST-SECONDARY LEVEL (PUBLIC)					
Quintile					
1	0.438	0.003	0.007	0.013	-0.010
2	0.500	0.006	0.012	0.013	-0.010
3	0.775	0.018	0.023	0.024	-0.006
4	0.700	0.018	0.026	0.021	-0.003
5	0.875	0.048	0.055	0.026	0.022
Mean	0.675	0.021	0.031	0.021	0.000

Source: J.Meerman, Public Expenditure in Malaysia - Who Benefits and Why, Oxford University Press, New York, 1979, Table 4.2, p. 107.

From Table 1.4, the data from the study confirm that a higher proportion of students of high status and prosperous parents than students of low status and poor parents are enrolled in schools. At the primary level of schooling, among the youths born in 1960, 99% of youths of high status and prosperous parents, as opposed to 71% of youths of low status and poor parents, are enrolled in schools. Among the rich, only 1% drop out of schooling, while among the poor, 29% drop out of schools at the primary level. When one considers the enrollment rates among the older group of students at the lower secondary level, the status and prosperity of parents have an even larger effect on the pattern of enrollment: 91% of youths of well-to-do parents, as opposed to 13% of youths of poor parents, are enrolled in schools. Among the high socioeconomic status students, only 9% drop out of schools, while among the low socioeconomic status students, 87% fail to survive through lower secondary schools (p. 6-7).

Table 1.4

PERCENTAGES OF YOUTHS CURRENTLY (1972) ENROLLED IN SCHOOLS  
BY SOCIOECONOMIC STATUS AND PARENTAL ADVANTAGE SCALES

Parental Advantage	Percentages of age 11+ youths currently enrolled in school				Percentages of age 15+ youths enrolled in school who have not completed Form 3			
	Socioeconomic status				Socioeconomic status			
	High	Medium	Low	Total	High	Medium	Low	Total
High	99	99	98	99	91	73	61	83
Medium	96	92	88	91	51	32	27	35
Low	89	82	71	78	39	22	13	20
Total	95	90	83	89	58	33	26	36

Source: Prepared from Tables 1 and 2, Dropout Study, the  
Ministry of Education, Kuala Lumpur, 1973, p. 7.

Given the educational opportunities at different levels available to different income groups, the ability to take advantage of such educational opportunities is very much dependent on another financial factor: the ability of the parents to pay for the "private costs" of sending and maintaining their children in school, given that the children's ability fulfills the academic requirements to stay in school. These out-of-pocket educational costs (OPEC) are mainly for books and stationery, other fees are for sports, library and examination fees, food expenses, uniforms, and transport, although all public primary and secondary schools are free. These OPEC expenses, which increase substantially with level of schooling, are a very heavy burden for poor households. The Ministry of Education estimated that the mean annual OPEC for a student at the primary level in 1973 was M\$114, and was M\$295 at the secondary level (US\$1 = M\$2.50) (Meerman, 1979: 113). Meerman (1979: 115) estimated the weighted mean annual OPEC for the three oldest students to be M\$123 at the primary level and M\$283 at the secondary level in 1974. For the poorer parents, the seriousness of the OPEC as a burden on their income is reflected in the share of household income going to OPEC. The mean yearly household income for households in the

lowest income quintile was M\$1,152 in 1974. For a secondary student in the lowest income quintile, the mean OPEC amount to M\$208 per annum (Meerman, 1979 - Table 3: 165), which would mean an educational burden of 13% of income. Such considerable private costs required to keep their children in school is a heavy financial burden for parents. The cost of capital must enter as an important factor in the calculation of the rate of return or benefits to be derived from educational investment for low-income families.

Colletta (1979) provides a vivid estimate of the magnitude of educational investment within the overall financial status of a Malay rubber tapper, who is quite representative of most low-income people in the rural sector:

At best, a tapper earns a little more than one hundred Malaysian dollars per month (about U.S.\$45). With two or more members of the family working this figure can rise to M\$100 plus per month. But with the average estate Malay family of 5.1 to feed, clothe, and school, expenses run between M\$250 and M\$350, or more per month. This usually means living from day to day by credit with the need for other household members to seek employment outside the estate. With the demand for basic necessities of life usually outstripping family income, education takes a low priority in actual expenditures. The average yearly cost to keep one child in school can run as high as M\$105 (p. 350).

It is not uncommon for poor families to have three or more children of school-going age (Tan, 1980: 242), therefore, the annual private costs of sending these children to just the primary schools amounts to multiple times that of M\$105. Moreover, there are positive economic reasons for the poor parents to keep children at home to help the parents labor in the rice-fields, doing minor jobs in the rubber smallholding or preparing dry fish for the market (Ibid, p. 250). This is especially applicable to girls who are needed at home to take care of younger siblings and do the household chores while both parents are out working to make ends meet. In addition, the low priority of educating girls vis-a-vis boys, in most lower-class families, is another important reason for the higher non-attendance or early dropout rates among girls (Strange, 1978; Colletta, 1976).

During the first decade of independence, the poor households, especially in the rural areas, where the majority of them live, were discriminated against by the state with regard to the distribution of educational provisions. In general, the rural schools tend to be seriously disadvantaged in terms of physical facilities, quality of teachers, and financial resources in comparison to schools in the urban centers. A 1970 survey (Malaysia,

1973) of primary schools revealed notable differences in the quality of education provided by English-medium schools (urban centered) and vernacular schools (rural centered). Briefly, the main findings were that the expenditure per pupil in English-medium schools is three times as high, on the average, as in the Malay and Tamil vernacular schools. English-medium schools are usually larger - - more than 50% of them have enrollments exceeding 600 pupils, while less than 10% of the vernacular schools are of this size - -; and English schools are much better equipped in educational facilities, with better qualified, recently trained teachers with greater exposure to the latest pedagogical methods and educational ideas.

In his micro-level anthropological field studies of three Malay communities in different parts of rural Malaysia, Syed Husin (1975) confirmed the finding of the Ministry Of Education (1973) and Meerman (1979) that there is a strong positive relationship between attendance at a formal institution of learning and class background. Syed Husin also found that there is a vast difference in the quality of education received by children from different socioeconomic backgrounds. He studied the three peasant villages of Kampong Bagan, Kangkong and Kerdau. In the



first community, out of 264 school-going children, 223, or about 88%, attended the relatively inferior vernacular Malay school, while only 31 or about 12% attended the far superior English school. Of these 31, only 9 were from the peasant classes, while the rest were from the landlord and middle classes. Of the 104 school-going children in Kangkong, only 8% were enrolled in the English school, and of these, 6 were from the landlord and middle classes. The same pattern existed in the third village of Kerdau, where of 119 primary school-going children, only 12 attended English school, and of these, 8 hailed from the landlord and middle classes. Syed Husin also noted that the numbers of students in the three villages who had the opportunity to pursue university education had been quite insignificant until recently. Even then, so far only 4 had made it to the university. Of these, the one from Kangkong is the son of a rich landlord while the one from Kerdau is the son of a senior teacher who is also a landlord. One of the two graduates from Bagan is a teacher's son while the other is the son of a rich landlord. Syed Husin arrives at an inevitable conclusion:

"It is true that education does provide a channel for upward mobility but even here the peasants find that the opportunities are better for the children of the landlords and those in the middle class" (Syed Husin, 1975, p. 99).

The Ministry of Education's comprehensive study of the problem of dropout at the national level (1973) provide important information about the educational participation disparity by social class at the lower secondary level (grades 7-9) of students ages 13+ to 15+.

Table 1.5

PERCENTAGE OF AGE 15+ YOUTHS CURRENTLY (1972) ENROLLED  
IN SCHOOL WHO HAVE NOT COMPLETED FORM III  
BY SOCIOECONOMIC STATUS AND PARENTAL ADVANTAGE SCALES.

Parental Advantage	Socioeconomic status			Total
	High	Medium	Low	
High	91% (446)	73% (256)	81% (207)	83% (909)
Medium	51% (752)	32% (942)	27% (852)	35% (2,546)
Low	39% (184)	22% (356)	13% (497)	20% (1,037)
Total	58% (1,382)	33% (1,554)	26% (1,556)	36% (4,492)

Source: Murad Bin Mohd. Noor, *Kajian Keciciran (Dropout Study)*, 1973, Table 2, p. 7.

The distribution of enrollment at the lower secondary level reveals that the status and wealth of the parents have a greater effect on the pattern of enrollment. Specifically, from Table 1.5 we can see that the enrollment rate of the youths of poor parents was a mere 13%, compared to 91% for the rich children. Correspondingly, the dropout rates were 9% for the rich and 87% for the poor children. The "Dropout Report" (1973)

pointed out that "... social class would operate even more sharply ... at the higher levels of education (where) their disadvantaged counterparts would be underrepresented" (p. 29).

In another similarly large nation-wide study undertaken in 1968-69, using a questionnaire survey covering 7,120 secondary school students in the ninth, eleventh and thirteen years of education in 34 schools, Takei, Bock and Saunders (1973) reported that the upper classes (the high and the high-medium social classes) account for as much as 60% of the total enrollment; of this 60%, the "high" class takes over two third of the total.

A roughly similar pattern of distribution of enrollment ratio by social classes is also reported by Chan (1975). Chan's thesis is entirely devoted to the analysis of the social class distribution of educational participation at the upper secondary level. The questionnaire survey covered 1,728 Form 5 students in 17 secondary schools. The study concludes that in the sample of upper secondary school students, those with fathers in the professional, technical and clerical occupations are most highly represented, while students with fathers in the lowest strata of the occupational hierarchy - urban

labo-ers, peasant farmers, rubber tappers, fishermen and those below poverty line - are consistently under-represented. Between the two extremes are students whose fathers are mostly in sales, services, and entertainment. Regarding the distribution of educational opportunity within the Malay community, Chan found that the majority of Malay students (66%) are in the Malay medium; in terms of socioeconomic background, middle and upper class students tend to predominate in the English-medium schools in both urban and rural areas. Lower working class students, however, tend to concentrate in the Malay-medium schools. The data also confirmed that Malay girls have a higher socioeconomic background compared to Malay boys, especially in the urban areas.

The creation of government secondary Residential Science Schools (RSS) and MARA Junior Science College (MJSC) in the 1970s was "partly induced by the need to address the crucial educational problems of the Malays in the context of national development, particularly the problems of educational disparity among the rural Malays" (Siti Zahara, 1975: 3). RSS and MJSC are essentially elite residential high schools preparing Malay students to enter tertiary institutions and pursue studies in science and technology. It is a significant part of the basic

government strategy to correct the imbalances in Malay participation in science and technology in education and in employment. The main justification for providing these special schools with boarding facilities is the belief that with better educational facilities and services, students from deprived and remote areas would have better chances of success in science and technology, and such success should lead eventually to an increase in the proportion of Malays in science and technology courses in the universities. What has been the result of this state attempt to equalize educational opportunities especially for the poorer Malays in the rural areas? Siti Zahara (1975) has assessed the performance of the early phase of operation of those MJSCs over the 1972-1974 period. She summarizes her findings by stating that attendance at these schools reflects a higher representation of higher income classes. Taking overall percentages of 670 students enrolled, only about 10% come from low social classes - peasant farmers, fishermen and farm workers - 20-40% from low medium or working class backgrounds, while as much as 50% from the higher social classes. In addition, she points out that there seems to be a strong relationship between the father's occupation and geographical residence: 65% of those identified as belonging to the

high social class lived in the urban centers, while the rest resided in the rural regions.

Regarding participation at the tertiary level of education, Lian (1976) offers several very interesting findings. Her data were obtained mainly from a survey of higher institution carried out chiefly by the Educational Planning and Research Division of the Ministry of Education in June 1975. As a proxy for social class, Lian used parental income, which she argued to be a reliable predictor of access to higher education. Her principal findings are:

- (1) Of the 9,652 first year students in her samples, 23.2% came from the high income class, defined as those earning M\$400 and above, although only 10.3% of the total households are in the high income category. Thus, this class is over-represented to the amount of 12.9%. At the other end of the spectrum, 36.7% of the students are from the low income class, defined as those earning M\$151 and below, although the percentage of households in this income category is 47.8. Therefore, the low income is under-represented to the amount of 11.1%.
- (2) The percentage of students from the high income class enrolled for science and technological courses exceeds the percentage of students from poor background enrolled in the same area of study by 4.9%. This finding has important economic significance, for it is undeniable that as the country expands and develops, its demands for graduates with diplomas and degrees in science and technology will be greater than its demands for arts and humanities graduates. This implies that students from rich background have better access to courses that are more in demand.
- (3) Finally, students from the large towns and cities

stand a better chance of gaining admission into colleges and universities than their rural counterparts. Moreover, they also stand a better chance of gaining admission into the more sought after science and technology courses.

The findings of Mrs. Sarjit Singh (1973) regarding the influence of family class background on the success of the school system, as measured by the degree of attainment, confirm those of Syed Husin (1975) and Meerman (1979). Mrs. Sarjit, whose survey was conducted in Petaling Jaya, an urban residential area, found that the correlation between fathers' status and respondents' educational attainment was 0.047, which is a significant correlation indicating that, on the whole, those persons who attained high education had parents with high status, and those persons who attained only a low level of education had parents with low status.

Mehmet and Hoong (1986), in their study of socioeconomic profiles of the 1983 graduates (samples of 2,110) in local universities, concluded that access to university education in Malaysia is heavily regressive, benefiting inordinately the rich and the well-to-do. Their results show that only 11.9% of the total graduates originated from poor households, making less than M\$300 per month. On the other hand, the middle-income families with M\$300 - M\$1,000 monthly accounted for 57.5%, whereas



households with more than M\$1,000 a month accounted for 30.3% (Mehmet and Hoong, 1986, Table 2-20, p. 54). Thus the university system, as presently administered, works more to generate inequality in income and wealth distribution than to promote equality. Mehmet and Hoong also attribute the under-representation of the poor families to the cost of university education: on the average for 1982/83, the tuition fees were M\$594.00, while the expenses for books and supplies, food and clothing, rent and transport, and other expenses were M\$3,000.00 (Table 2-22, p.56). Such amounts are too expensive for poor families. Furthermore, an inspection of the relative shares of public funds for student financial support by different income classes reveals that public subsidies clearly tend to favor the higher income classes (Tan, 1980: 281). Tan (1980) concludes that the benefits in higher education for the lower income classes, particularly those living in the rural areas, in comparison to the high income classes and the urban-biased location of the tertiary institutions, are relatively inconsequential.

An overall plausible conclusion can be drawn from the examination of the evidence on educational distribution among the social classes: the evidence does imply probable

causation on the basis of judgmental interpretation. The prevailing direction of causation appears to run from "poverty" to education rather than the reverse, i.e., poverty determines the level of educational attainment or opportunity, usually at the lowest level for the majority of the poor. This point has been substantiated, especially in the discussion of the odds stacked against the poor in their attempts to take advantage of the equality of opportunity to participate even in the lowest level of education. This is not to deny the possibility or the actuality of some children from poor peasant families or from disadvantaged areas succeeding to the extent of reaching the highest point in the educational ladder, and from there joining the ranks of the highest paid professionals or bureaucrats. Mrs. Sarjit Singh (1972) states that such socioeconomic mobility is and has been the exception rather than rule in Malaysia:

"... movement from low status to high status is mostly by persons who achieve exceptionally high education for their social status or origin" (p. 80).

The Dropout Report of 1972 shows that "parental advantage" was the most powerful factor in explaining why some children had dropped out of school while others had not. This factor alone explains 23% of the variation in dropouts, while that of socioeconomic status explained

only 10%. Other factors, such as motivation, school characteristics, modernization and parent and teacher expectations, are also significant. However, one important point this study makes is that rapid expansion of educational accessibility to a wide cross-section of the rural population since 1960 has significantly improved educational opportunity for all. Using the same study, but confining his attention to elementary school children, Isahak (1977) found that the zero-order correlation between the family's socioeconomic status and pupil achievement is positive but low, i.e., 0.25.

Hussein (1979), who utilized a subset of the data from the same study, analyzed students' performance at the lower secondary level. Using Pearson correlation coefficients, he found that the association between socioeconomic status and the Standard Five Examination of the lower secondary students (11+ year old) is about 0.22, while at the lower Certificate examination level (15+ year old), the association is relatively weaker, i.e., 0.16. A study undertaken by Takei, Bock and Warland (1973) showed that the aspiration level of Malay youths in education is high, regardless of social background. Aspiration and expectations, which include high status occupations as well as the possession of a strong faith in education

(compared to the Chinese) is claimed by the researchers to be due to the positive perception of structural opportunities available to Malay youths.

In the most recent research, Rabiayah (1986) conducted a tracing study of a set of the sample population born in 1956 and 1960 to relate education and social mobility in Peninsular Malaysia between 1972-1982 within the context of the National Education Policy. Her sources of data are the 1972 Dropout Report and the 1982 Household Well-Being Survey. In an overall remark, she notes that "... the maximum effect of education on upward social mobility (in Malaysia) is stronger than the maximum effect of socioeconomic status, meaning that education is the key determinant to move up in the social structure (p. 200). The results of her study show that because of the democratization of education in Malaysia such as free education for elementary and secondary schools, automatic promotion until Form 3, food supplementary program and a text book loan scheme for the poor, improvement of school facilities in disadvantaged areas, and adopting Malay language as the medium of instruction and public examinations, there has been significant improvement in educational achievement and in the social mobility of the lower occupational status children. More than half of the

children (though not a proportionate number) who have achieved high occupational status had parents with low occupational status (p. 199). Singling out the Malays, the author notes that educational attainment is more important than background to achieve high occupational status, and since competition for high status occupations is increasing, "higher education is the main puller in high status occupations" (p. 175). From the samples of the Age Cohort of 1956 and 1960, Rabieyah (1986) has found the social mobility of Malay children to be as much as 46.1% with upward mobility, 43.9% with static mobility and 10.0% with downward mobility (Rabieyah, 1986: Table 4.6, p.140). Between rural and urban children, she found that 43.6% of children from rural areas experienced upward mobility, compared to 32.5% from urban areas.

Using fathers' occupational status as the main criterion to determine the social class background of 695 graduating students of the 1978 classes of five local universities, Marimuthu's (1984) study shows that only 2.7% of the students came from higher socioeconomic status homes; 20% came from homes which can be considered as lower middle class; 20% came from working parents who hold skilled jobs; and 37.8% came from parents who are in "semi-skilled" and "unskilled " jobs. In addition, 60% of

the students' homes are located in urban areas, from towns to the metropolis, and about 40% have their homes located in rural areas, such as villages, rubber plantation areas and new settlements (Marimuthu, 1984: 27). The author relates the significant representation of students from lower socioeconomic classes to the rapid development and democratization of higher education in Malaysia: previously, only an academic and social elite had been recruited and trained, while universities now have opened their doors to the "unintellectual multitude" (Marimuthu, 1984:3). Thus, students from varied social backgrounds have obtained better access to a university education.

Another study that illustrates the intra-Malay class struggle is that by Haris (1987). In his preliminary study of Malay social mobility and educational advancement in relation to state intervention strategies, conducted in the semi-urban society of Permatang Pauh, he found "greater advancement" by two children from 35 peasant families pursuing university education, compared to eight children from 18 families categorized as government officers, and six and eleven children from 30 and 57 big business and small business families, respectively. In another study, of the rural village of Sungai Raya, Rogers (1986) found dramatic educational advancement. At the

time of his initial investigation in 1966, he found that no Malay from Sungai Raya had ever passed the examination at the end of Form 5 (11th grade) that was a prerequisite for further formal education. In his second visit, twelve years later in 1988, he discovered one young man who had obtained a Bachelor of Arts in actuary science, and four others were studying at universities. In addition, two women were enrolled at the Institute of Technology, two men were attending teacher training colleges, five men and two women were enrolled in Form 6, the pre-university classes.

Ghani (1987) found that of 79 Malay students, 41 were from the lower socioeconomic class (monthly income below M\$400.00) compared to 18 and 20 students from the upper (monthly income exceeds M\$1,000.00) and middle classes (monthly income between M\$400 and M\$1,000.00). Unlike Siti Zahara (1975), who found major representation of higher social class Malay students in MARA Science Secondary Schools, Ghani's result indicates that from his random sampling of 79 Malay students in the Matriculation class, more than half (51.9%) were from a lower socioeconomic class background, and only 22.8% and 25.3% were from the upper and middle classes, respectively.

Data reported by Mrs. Sarjit Singh (1972, 1973) enable one to assess the relationship between education and inter-generational occupational mobility. Although Singh (1972) studied a 5% random sample of heads of households in Petaling Jaya, a fairly small local sample of an atypically modern and burgeoning community, she provided an example of an intergenerationally mobility table in Malaysia from which one can draw some inferences. From the point of view of the individual, the payoff of educational attainment for occupational mobility (or status maintenance) is best inferred from Table 6 of the probabilities associated with each educational level within each paternal occupational group. Of sons with tertiary education from professional/managerial parental occupations, 84% were in professional/managerial occupations, compared to 70% and 59% of sons from white collar and manual parental occupations respectively. This strong association within occupational groups between education and occupational attainment may be partially due to the number of positions available for educated persons in this community. The finding strongly suggests that the association between fathers' occupations and youths' educational levels has substantially loosened in one generation. Singh (1973) also compared social mobility by



ethnicity and education (Table 1.6). With only primary education, about 92% of Malays and Indians, and 76% of Chinese remained stable. While about 20% of Chinese and 8% of Indians moved upwards, no Malays were upwardly mobile with only primary education. With secondary education, 50% of Malays were upwardly mobile, compared to 30% of Chinese and 37% of Indians. This is paralleled in the case of higher education: here, about 76% of Malays experienced upward mobility, compared to 58% and 64% of Chinese and Indians, respectively. Significantly, no Malays with higher education moved downwards from social origin, whereas this was true of 4% and 3% of Chinese and Indians, respectively. Thus, to inherit a non-manual occupation, Malays generally needed at least secondary education, although some Chinese could achieve the same level with less education. Fathers of Malays, therefore, had to provide secondary or higher education for their children to a much greater extent than did Chinese fathers in order to transmit their status to their offspring. Of the three ethnic groups, the Chinese were the least, and the Malays the most, dependent upon education for upward mobility (Singh, 1973: 360-2).

Table 1.6

SOME OCCUPATIONAL ATTAINMENT BY EDUCATIONAL ATTAINMENT  
 WITHIN FATHERS' OCCUPATIONAL GROUPS: PETALING JAYA

FATHER'S OCCUPATION	SON'S EDUCATION	NUMBER OF CASES	SON'S OCCUPATION		
			PROF/MNGR	WHITE	MANUAL
Prof/Mngr	Tertiary	45	84%	16%	0%
	Secondary	22	36	55	9
	Primary	2	50	50	0
White Collar	Tertiary	116	70	30	0
	Secondary	239	21	70	9
	Primary	20	0	80	20
Manual	Tertiary	34	59	41	0
	Secondary	126	9	55	37
	Primary	110	3	15	83

Source: Singh, 1973. Education and Social Mobility in Malaysia: A Case Study of Petaling Jaya, unpublished Ph.D. Dissertation, University of Malaya, p. 361.

Table 1.7  
 SOCIAL MOBILITY IN WEST MALAYSIA  
 BY ETHNICITY AND EDUCATION

Mobility	LEVEL OF EDUCATION								
	Primary or less			Secondary			Higher		
	Mly	Chi	Ind	Mly	Chi	Ind	Mly	Chi	Ind
Up	0.0	20.5	8.3	50.0	29.7	36.7	75.8	57.7	63.9
Stable	91.7	75.9	91.7	41.7	60.7	59.5	24.2	38.5	33.3
Down	8.3	3.6	0.0	8.3	9.6	3.8	0.0	3.8	2.8

Source: Singh, 1973. Education and Social Mobility in Malaysia: A Case Study of Petaling Jaya, unpublished Ph.D. dissertation, University of Malaya, p. 361.

In the modern sector of Malaysia, especially in education, government, commerce, and industry, where credentialism is pervasive, education will play a larger independent role in social mobility than class origins. This is because the link between class and schooling in Malaysia has been weakened by the rapid expansion of education. In the aggregate, the linkage between class and schooling has been drastically diminished: it has been

cut almost one third in one generation (Wilson, 1977: 65). With continued economic growth and widening retention rates in schools, education can be expected increasingly to loosen the tie between generational attainment in Malaysia.

The above literature review indicates that the highly optimistic view of liberals, that almost any type of increased investment in education would automatically reduce social inequality, does not hold; nor do the studies support the more extreme position of the revisionists that increased provision for schooling will have no effect on existing social equalities. The most appropriate position in developing countries appears to be what Snodgrass (1980) has called a "guardedly optimistic view." "As GNP per head and mean years of schooling rise, there is a broad tendency for all forms of inequality to decrease ... there is a long-term trend toward more equal distribution of schooling and probably also of earning" (Snodgrass, 1980: 147).

However, Malaysian government policy makers persistently argue for "... the vital role of education in the alleviation of poverty" (Malaysia, 1971). It must be noted that poverty reduction does not necessarily mean that equality has been achieved. Equality means the

narrowing of gaps between and among various groups, including the poverty and non-poverty groups, urban-rural, and males and females. The validity of the revisionist view concerning educational opportunity and social mobility for less industrialized countries like Malaysia has not been tested rigorously. If it is valid, then the government's reliance on education to equalize social opportunity may be displaced. It is important, therefore, that both the conventional and revisionist theories be tested in the Malaysian context. In the light of uncertainty regarding the social impact of education, especially higher education, the main questions to be addressed here are whether increasing equality of educational opportunity in Malaysia has led to increasing equality of social opportunity, and whether the government emphasis on education to achieve the goals of the New Economic Policy, particularly in poverty reduction, by providing greater chances for lower class Malays in higher education is justified.

## CHAPTER II

### PREFERENTIAL POLICY

#### 2.1 INTRODUCTION

During the last several decades in western societies such as the United States, Great Britain and Western Germany, there has been a strong interest in the phenomenon of low academic achievement among members of minority groups. This phenomenon is viewed by many (Strike, 1982; Ogby, 1978; Gutmann, 1987) as indicating the existence of serious barriers to the extension of equality of opportunity in society. Schools are generally perceived as playing an important part in the process of assignment to adult occupational roles, and since this assignment is usually assumed to be based primarily on achievement rather than on ascriptive criteria, the empirically observed relationship between socio-economically disadvantaged background and relatively poor academic achievement tends to be viewed as a moral and political problem for a society which has traditionally claimed a commitment to the principle of equal opportunity for success through legitimate means (Takei, Bock and Saunders, 1973: 2). Currently, emphasis seems to be

shifting away from modifying the attitudes and behavior of those who are "disadvantaged" to a more critical scrutiny of the institutionalized practices which presumably perpetuate disadvantage in educational and occupational attainments (Ogby, 1978). Although some have proposed the adoption of "compensatory discrimination" to reduce the disparity in occupational and economic attainment between majority and minority individuals, the widespread use of such an approach seems unlikely. University departments and businesses are reputedly attempting to recruit minorities, but complain that they are unable to locate "qualified" minority individuals (Takei et.al.: 2). It is becoming increasingly clear that even if we confine our attention to the educational institution and ignore other arenas of discrimination, there are no easy solutions to the problem of providing equal opportunity to all. However, since there is still a tendency, especially among political leaders, to believe that achieving greater equality of opportunity in education will promote a more just and stable society, it seems instructive to focus attention on a country whose government has established a national goal of increasing academic opportunities for students from a socio-economically disadvantaged ethnic group - - Malaysia.

Government intervention in social stratification and mobility processes is common in developing nations and is not unknown in the industrialized world, particularly where different ethnic or racial groups occupy disparate positions in the social structure.

## 2.2 AFFIRMATIVE ACTION IN PERSPECTIVE

Most of the emerging states of the world share the problems confronting communally fragmented and compartmentalized societies. For many of these states, the colonial era brought diverse communities into contact with each other but failed to integrate them. Instead, each community tended to find a place in the total economic and social order by monopolizing or dominating specific sectors of the economy and providing certain services for the total society. Diverse ethnic, cultural, and tribal communities frequently became interdependent parts of a larger political and economic system; yet social compartmentalization gave a "caste" character to the total social and political order, in the sense that persons born in a particular community found their opportunities so circumscribed that there was little possibility of assuming roles other than those traditionally occupied by



their own communal groups. This compartmentalization of society into a honeycomb-like structure also meant that the various influences and stimuli for modernization did not affect each community in the same way or to the same degree (Means, 1972). As a consequence, the impact of modernization has generally perpetuated or exacerbated such cultural and communal compartmentalization. Communal disparities of income, productivity, education, skills, modern attitudes, and behavior patterns often become more pronounced as these states are propelled into the modern world. Furthermore, exaggerated social differences generate political cleavages which may become so intense as to threaten the viability of the state.

The communal structure of many developing countries poses extremely difficult problems for developmental strategy. With the attainment of national independence, the political leaders of the new states have usually set for themselves the goal of modernization. Initially, this goal may be narrowly defined in terms of raising total gross national product, diversifying the economy, and promoting industrialization. Ultimately, however, the question of social transformation has to be faced. Is the society as a whole to be restructured to diminish the disintegrative effects of communal compartmentalization?

Is the state going to promote a more equitable distribution of status roles, economic rewards, and political power among all ethnic and communal groups? In short, is there going to be a conscious effort to make a modern integrated society which is functionally diversified and has universalistic achievement norms, with equal opportunity for all its members to have access to positions of power and wealth within the society?

If these are accepted as ultimate goals, a question still remains: what policies are appropriate for the restructuring of a transitional social order? Means (1972) suggests two alternative strategies. The first is to apply universalistic achievement norms in all political and social organizations, and to wait for the great discrepancies in income, skills and status roles among communal groups to be gradually eroded, until a modern social structure emerges bit by bit, in future generations. This may be a very slow process, particularly when the motivations, attitudes, and self-perceptions generated within a communal group provide major obstacles preventing individuals from taking advantage of alleged "equal opportunities ." In the short term, such policies tend to intensify communal differences

rather than inducing an integrated modern social order (Ratnam, 1965; Chan, 1977).

Because of the social and psychological impediments to the operation of universalistic norms, an alternative strategy has been suggested. Some scholars argue that particularistic norms are needed to overcome the unique sociopsychological obstacles to development which confront each cultural or ethnic community. Presumably, therefore, an economic or sociopsychological handicap should be balanced by a legal advantage or "special privilege". While the argument may not be quite so abstract, it is a familiar one in most countries where one finds deprived ethnic and cultural communities that are self-consciously trying to better their lot while preserving their communal identity. The arguments are remarkably similar, whether they emanate from black activists in the United States, the spokesmen of untouchable castes of India, the Sinhalese of Sri Lanka, the Hausa-Fulani of the northern region of Nigeria, or the Africans in East Africa (Mehden, 1975).

It is worthwhile to reflect for a moment on the question of why differences among ethnic groups have become a policy issue in so many countries. It was once widely accepted in advanced industrial societies that

inequality among ethnic groups did not matter a great deal as long as the state endeavored to remove barriers to individual advancement, ensured a minimum standard of well-being for all its citizens, and reduced disparities in income to some degree. Since ethnic groups, it was assumed, differed in the attitudes and motivations that shaped the kind of education and occupations they sought and their ability to compete, there was no reason to expect that all ethnic groups within the same society would have similar educational, occupational, or income profiles - at least not in the short run. It would not be expected, therefore, that fixed percentages of each ethnic group would hold professional jobs or be in the top ten percent income bracket. In any event, there was no need for policy makers to make equality among ethnic groups an objective as long as they were concerned more broadly with increasing equality of opportunity and reducing income inequalities. In the long run, it was assumed, even the cultural differences might disappear and class would displace ethnicity as the basis of social division in advanced industrial societies.

In recent years these arguments have been eroded. One reason is that disadvantaged ethnic minorities have almost everywhere organized to make demands upon

government, and in some instances they have made their loyalty to the state and their willingness to act by democratic procedures contingent on the commitment from government to support their efforts toward advancement. It is now generally understood in most industrial societies that governments must be responsive to disadvantaged ethnic groups if political stability and social harmony are to prevail. Why has there been such a resurgence of ethnic identity, and why do ethnic groups now demand a larger share of the benefits of industrial societies than they did earlier? For the present purpose, it is sufficient to note that on this question of the equitable sharing of benefits there are many similarities in the arguments made by disadvantaged ethnic groups in both developed and developing countries.

Societies obviously differ a great deal in the character of their ethnicities, the intensity of ethnic conflicts, the degree of mobilization by groups along ethnic lines, the history of group relations, the extent to which there are widely shared fundamental goals and values with respect to individual group rights, and, of course, the kind of political systems they have. The argument here, however, is that the policies of preferential policy, though adopted by countries that are

different in so many respects, do have some similar effects and that however different the objectives of their advocates, such policies push societies in a similar direction.

There is, for one thing, a similarity in the arguments employed by various disadvantaged ethnic groups. The most common argument is that inequalities among ethnic groups are not simply the result of cultural differences but reflect prejudicial action by social groups and/or by governments themselves which favor some ethnic communities over others. Members of disadvantaged groups may have been denied educational opportunities because of their race, caste, religion or language; the state may have provided greater educational and employment opportunities; norms of subordination may have been created by racism or religious communalism. In short, the ethnic group is disadvantaged, it is argued, not exclusively because of its own cultural norms, but because barriers have been placed against its advancement. Nor is it sufficient, the argument continues, merely to remove these long-established barriers, since disadvantaged groups would start the competitive race with a handicap. Government must intervene so as to provide disadvantaged

ethnic groups with some special benefits or preferences to enable them to catch up.

In response to these arguments, many governments have designed a variety of intervention strategies aimed at the realization of greater socioeconomic equality among ethnic groups. Preferential strategy - goals, quotas, or reservations for ethnic groups in university admissions, business contracts, etc - is simply one of several policies for dealing with ethnic inequalities. Other policies also have sought the economic improvement of particular ethnic groups, but the means employed are more indirect.

By government intervention strategies in the form of preferential policies we mean laws, regulations, administrative rules, court orders, and other public interventions to provide certain public and private goods, such as admission into schools and colleges, educational programs, business loans, jobs, promotions, and rights to buy and sell land on the basis of membership in a particular ethnic group. In the United States, these policies are called "affirmative action" by supporters and "reverse discrimination" by detractors; in Sri Lanka and India, they are called "protective discrimination"; and in Malaysia, they are referred to as "special rights."

Regional development plans, sectoral investment strategies, social services programs, income and wealth redistribution policies and other administrative reforms may all have as their objective the reduction of socioeconomic or political inequalities among ethnic groups, but these policies, whatever their intentions, do not explicitly allocate benefits on ethnic grounds. In contrast, preferential policies make explicit use of ethnic, as distinct from universalistic, nonascriptive criteria. Under these policies, individuals are given special benefits not because they live in underdeveloped regions, work in lagging sectors of the economy, or are educationally and economically disadvantaged, but because they belong to a particular ethnic category or cultural group into which they have been born and which, on the average, is less educated, earns less, and has lower-status employment than do other ethnic groups. Preferences based on race, color, caste, national ancestry, or place of birth are deemed more invidious than preferences based on class membership, residence, or occupation, in part because the former attributes are ones over which the individual has no control. One advantage of policies which employ nonascriptive criteria for allocating benefits is



their greater acceptability to those who are not beneficiaries.

There are, nonetheless, a number of reasons why preferences based upon explicit ethnic criteria have been adopted by a number of multiethnic societies. Donald L. Horowitz (1985: 635) in *Ethnic Groups in Conflict*, offers preferential policies as one of the strategies of conflict reduction. (The others are ethnic policy and structural techniques). He explains that policies of ethnic preference are regarded as exceptions, temporary expedients, often with a specific time limit, to enable particular ethnic groups to "catch up" because of the unfortunate inability of the preferred group to compete on equal terms without preferences (D.Horowitz, 1985 : 657). The adoption of preferential policies, according to Horowitz, is fostered by the confluence of several explanations: preferential policies require little in the way of expenditure and hence are low-cost strategies for coping with ethnic conflict; and there exist influential political constituencies with an interest in the adoption of such policies. The adoption of the policies depends in part on how well organized and effective such groups are, and the scope of the policies reflects the sectors in which they are active (D.Horowitz,

1985: 658). In addition, a formal preferential program by government usually involves a conviction on the part of policy makers that ethnic preferences or quotas are required to achieve some larger purpose. That conviction is either part of their intellectual baggage at independence, as the need to enhance opportunities for certain ethnic groups, and/or it is the product of dramatic events that occur later.

M. Weiner and M. Katzenstein in analyzing the preferential policies in India (1981) offer three reasons. One is that the policy is directly targeted to meet the demands of a group that believes it has been unjustly treated. Such a policy automatically demonstrates political responsiveness to demands made on the state. Another argument is that inequalities cannot be reduced merely to policies to eliminate discrimination in education and employment, since such policies are rarely effective in ending disguised and more subtle forms of discrimination. Group membership, it is argued, continues to be a determinant of an individual's place in a multiethnic society because of the hidden ethnic preferences of admission officers, teachers, and employers - and these can be overcome only by government-mandated

affirmative action programs, quotas, reservations, and the like.

A third argument, and to some the most critical, is that preferential policies rest upon the moral and philosophical claim that the social or economic backwardness of a particular ethnic group results from a history of discrimination, either by the dominant ethnic group or by the state, and that preferences are justified as a form of societal compensation for past action.

Wang (1983) offers similar reasons. First, the group or groups in question have suffered significant negative discrimination in the past, and society must therefore make restitution for this injustice. Second, the group(s) have special rights in the society by virtue of certain historical positions or constitutional provisions. And third, in the interest of political integration of a plural society, the lines of economic and educational inequalities should cut across rather than coincide with rural or ethnic lines.

Critics of the policies reject on moral grounds the substitution of group membership for individual merit as the basis for societal stratification. They reject the notion that compensation or "reparation" on the part of the present generation for the behavior of previous

generations is justified, or that some individuals should be asked to pay collectively for the injustices committed by others.

These arguments and their many variations are widely heard. Nonetheless, a judgment by politicians as to the political effects - both gains and losses - of preferential policies has been more important in guiding the future course of policy than the actual effects of the policies on the intended beneficiaries.

Malaysia is a prime example of the third form of reasoning, that affirmative action policies are needed to make a society less deeply divided and politically stable.

### 2.3 "THE SONS OF THE SOIL" AND THE MIGRANTS - A COMPETITIVE APPROACH

Myron Weiner (1978) in his book, *Sons Of The Soil*, examines the social and political consequences of internal migration in a multiethnic, low-income society in India. The study begins with two simple hypotheses:

1. that the process of modernization, by providing incentives and opportunities for mobility, creates the conditions for increasing internal migration.

2. that the modernization process nurtures the growth of ethnic identification and cohesion.

These two processes are often antagonistic, since in a multiethnic society the one encourages the movement of individuals across cultural, linguistic and ethnic regions, thereby changing the "mix" of ethnic groups within a given space, while the other often generates anti-migrant sentiments among local people. Economic and demographic tendencies thus conflict with social, cultural, and political ones.

Inter-ethnic relations in the multiethnic societies of the developing world are in a fluid state because of both these processes: migration is critical because it changes both the demographic and economic balance of groups within a given space. Hence, the "protection" of territorial space and the economic opportunities that exist within it are often central objectives of the local population, while the expansion of opportunities within the same space is a central objective of migrants. Migration within a multi-ethnic society, therefore, frequently has destabilizing effects and tends to arouse intense conflicts.

In this study of ethnic demography, three concepts have proven to be of particular value. The first is the notion of territorial ethnicity - the notion that certain ethnic groups are "rooted" in a particular space. Whether people see themselves as having an exclusive proprietary right over what takes place within that space, or whether they envision sharing that space with others is a critical element in the patterns of integration within a political system.

The second is a notion of a dual labor market, with its conception of two types of jobs: those in what have been called "traditional," "marginal," "unorganized," or "informal" sectors, employing low-skilled manpower at low wages, as against the more "modern," "developed," "formal," and "organized" sectors that employ the skilled at higher wages. Scholars have distinguished between a "core" region, where centralized authority makes its appearance and industrial development becomes more advanced, and a "peripheral" region that is less developed and is usually at the "geographical extremities of the state," with the core region recruiting its low-skilled, low-wage labor from the peripheral region. Migrants from the periphery move to the core region to pursue low-paying jobs that the indigenous population does not want. Such a

pattern can be found in much of western Europe, where low-income migrants are imported from the "periphery" countries of the Mediterranean, or in the United States in areas where Mexicans, Puerto Ricans, or blacks are employed in low-skilled, low-wage occupations.

Third is the idea of an ethnic division of labor. The dual labor market may be ethnically stratified, that is, each occupation in the system of occupational stratification recruits primarily from a single ethnic group. In the classical conception of an ethnic division of labor, migrants belonging to one ethnic group move from the periphery to work in subordinate positions vis-a-vis the ethnic group predominating in the core. The migrants settle into their own communities, where they develop culturally distinct ethnic associations that both strengthen their identity and provide them with social support; the migrants thus become separated from the local population in cultural, social, employment, housing, and even in political organization. In a multiethnic society, or in a society that imports portions of its labor force, migration is often ethnically selective, and a dual labor market is generally accompanied by an ethnic division of labor. Uneven development can thus take place between peoples as well as between places.

However, it does not follow that migrants need be at the bottom of the labor market. In developing countries, as in advanced industrial societies, migrants can be engaged in a variety of occupations up and down the occupational hierarchy, and their education level can range from little to no education to the most advanced degrees. This simple and obvious observation about migration is often overlooked in much of the discussion of migration to the crowded cities of Asia, Africa, and Latin America, where it is all too often assumed that migrants are necessarily unskilled, poor illiterate, the inhabitants of slums and squatter settlements. Though in most developing countries this is the largest single group of migrants, there are other types of migrants whose characteristics - and therefore whose place in the ethnic division of labor - are quite different.

Migrants may be entrepreneurs, shopkeepers, traders, and money-landers, generating new economic activities either in the "core" or in the "periphery." They may be self-employed professionals or employees who by virtue of their advanced education, skills, and drive are able to take positions that the local population are either unable or unwilling to take or, in some instances, from which they have been excluded.



The reasons for this particular ethnic division of labor are not easy to describe briefly. The division may have resulted from policies adopted by colonial governments to provide facilities or preferences to some ethnic groups over others; it may have resulted from the character of the local economy, which made the new positions in the labor market less attractive to local people than to migrants; or it may have resulted from differences in the social structures and cultures of the various ethnic groups. Observers - and more importantly, participants - are likely to offer very divergent explanations: some (usually local people) will emphasize the political element that made it possible for one ethnic group to "exploit" another; others (usually migrants) will emphasize the "cultural" differences that led one ethnic group to take advantage of opportunities more successfully than others. But whatever the explanation, the result may be the emergence of a new economic sector, while "locals" remain in the traditional sector or in the subordinate parts of the emerging economy.

An ethnic division of labor - even one with the migrants at the top of the occupational hierarchy - does not necessarily result in ethnic strife. In multiethnic plural societies diverse ethnic groups may interact in the

market-place, but otherwise remain aloof and inert, even under the control of a state system dominated by a single ethnic group. Under these circumstances there may be relatively little conflict among ethnic groups. This level of "integration" also seems likely when each group maintains its spatial exclusiveness, when there is little in the way of social mobility, and when there are few new resources over which ethnic groups may compete.

According to Weiner (1978), it is not inequalities between ethnic groups that generate conflict, but competition. Inequalities, real or perceived, are a necessary but not sufficient condition for ethnic conflict; there must also be competition for control over or access to economic wealth, political power, or social status. There are a number of conditions under which such competition takes place; under each of these the existing ethnic division of labor may be questioned by one or more ethnic groups.

First, when the ethnic division of labor between migrants (and their descendants) and nonmigrants parallels class relationships that ordinarily have a high conflictual potential -- as between industrial managers and workers, landlords and peasants, grain merchants and agricultural producers, the police and the public,

shopkeepers and consumers -- adversarial competition may occur. For many reasons, these exchange relationships become conflictual, and when the ethnic groups in the exchange belong to different social classes, there is a high potential for ethnic conflict.

In other words, conflicts that ordinarily take place in any society that is modernizing can become defined as an ethnic problem because of the ethnic division of labor. Marxists often dismiss these ethnic conflicts as a form of "false consciousness," that disguises the "real" class tension. What is "real" and what is "false" in human relationships is an epistemological issue that cannot be wholly resolved by empirical data; here we can only note the facts themselves - that when there is a close fit between the class division and ethnic division, conflicts generally take on an ethnic character that often transcend class differences within each of the ethnic groups.

Second, when the local population seeks access to occupations that they previously did not seek or from which they were once excluded, conflict may ensue. In short, the ethnic division of labor may no longer be acceptable, because there is increasing mobility, or aspirations for increasing mobility, on the part of a previously subordinate population. Such aspirations may be

stimulated by a variety of factors - an expansion of the educational system to provide new opportunities for children of the disadvantaged ethnic group, a decline in agricultural income or employment that leads agriculturalists or their children to try to enter urban occupations, or the stimulant to mobility provided by the growth of the mass media.

To anticipate a central proposition of Weiner's book, middle-class nativist movements in opposition to migrants tend to emerge in those communities where the local population has recently produced its own educated class that aspires to move into jobs held by migrants. In a situation in which the employment market in the modern sector is not expanding as rapidly as the number of entrants, local aspirants to middle class status may view similarly educated migrants as blocks to their mobility.

Third, conflict may occur when a change in the power structure stimulates competition by giving one group the political resources for modifying or transforming the ethnic division of labor. Hence, the movement into political power of a population that has been economically and socially in subordinate positions typically stimulates efforts on the part of the new power group to change the occupational structure. Several examples come to mind: the

Burmese in relation to Indians; Malays in relation to Chinese; and Ugandans in relation to Asians. In India, examples are the Marathis in relation to Tamils and the Assamese in relation to Bengalis.

Much of the discussion of core-periphery relationships and "internal colonialism" has focused on the ways in which the "core" population dominates the migrants from the periphery. In the post-colonial phase those who come to exercise governmental authority often originate from the subordinate economic group in the ethnic division of labor, especially when power shifts to those who are the most numerous. To put it another way, the ethnic division of labor and the political division of labor may become divergent. In this situation, governmental authority is likely to be directed toward restructuring the ethnic divisions of labor - a situation fraught with conflict.

An additional potentially explosive situation exists when the new power elite has been economically and socially subordinate to the ethnic group that dominates the urban center in which the capital is located -- that is, when the geographic "core" and the political "core" are held by different ethnic groups. This is what made the cities of Rangoon (with its Indian population), Kuala

Lumpur (Chinese migrants), Gauhati in Assam (Bengali and Marwari migrants), and Bombay (Tamil migrants) particularly explosive centers.

Perhaps, ultimately, it is the development process itself that undermines the existing ethnic division of labor by opening up new avenues for educational, social, economic, and political advancement. There may be new opportunities in the industrial sector as a result of industrial expansion. Or on the land, these opportunities may arise because the government has "opened" up new lands through irrigation works, land clearance, and rural colonization schemes. In education, opportunities have opened up to ethnic groups that had hitherto been excluded. There may be new opportunities in administration, either because the bureaucracy has expanded its size, or because it has become more open and less ethnically restrictive. Finally, the political process itself may create new opportunities by permitting competition for public office. Tensions are most often produced when modernization opens some spheres more than others - when, for example, local people are given new access to political power, but not to education or to employment, or to employment in the public sphere, but not in the private sector.

The arenas within which migrants and locals compete are thus defined by what the development process and the political process have opened; for a critical dimension of ethnic conflict is the extent to which groups battle over access to and control over new resources. Moreover, to the extent to which group interactions lead to a sharpening of ethnic distinctions, an adversary relationship emerges that, in turn, further strengthens ethnic identities, promotes ethnic solidarity, and intensifies ethnic exclusiveness. An adversary relationship between ethnic groups also inhibits the growth of class-based relationships, for it dampens class conflicts within ethnic groups even when there are growing economic and social inequalities within that group.

In this struggle for access to resources, ethnic groups also create their own resources. Most important is the development of various ethnic infrastructures: ethnic restaurants, religious institutions, newspapers, charitable organizations, neighborhood associations, educational centers, welfare institutions, medical facilities and burial associations. These institutions also become centers for the emergence of ethnic leaders who try to speak on behalf of the community: newspaper

editors, the clergy, heads of ethnic associations, and elected political leaders.

Not only migrants, but also local groups organize new resources in this struggle. Indeed, to the extent that local groups seek to restructure the ethnic division of labor, they must build political resources - new journals to articulate the claims of the local people, literary associations to attract the emerging intelligentsia and, ultimately, political organizations to press nativist claims upon government.

In his study, Weiner views policy not as an attempt by a "neutral" government to find a solution to the tension between natives and migrants, but rather as an instrument or weapon of one group or another in the struggle to maintain or transform the ethnic division of labor. Indeed, governments may be willing to tolerate and even generate ethnic strife if it serves to reduce migration or reverse the flow, or to bring about compliance with policies intended to change the ethnic division of labor.



#### 2.4 PREFERENTIAL POLICY IN MALAYSIA

In the Malaysian case, preferential policy programs are aimed at improving the economic position of Bumiputras (literally "princes of the soil"), who consist of Malays in the Peninsular and other indigenous communities in Sabah and Sarawak. Bumiputras are not a minority in the conventional sense of the word, since they not only constitute the numerical majority in Malaysia but also enjoy political dominance, even though they are economically weak. On the other hand, the non-Bumiputras, i.e., the Chinese, Indians, and others who form 45% of the population (see Table 1.1), are economically better off but politically weak vis-a-vis the Bumiputras. The groups that receive the benefits of affirmative action policies are those who have the political power to legislate them. Here we find that the economically disadvantaged are politically powerful, and vice-versa.

While the above situation may seem a bit strange, it is by no means unique and can be found in countries such as Kenya, Uganda, and Indonesia. These countries share a few fundamental characteristics: they are post-colonial societies with ethnically divided populations and the distribution of economic and political power runs along ethnic lines.

This separation of economic and political power is a result of colonial policies and practices which were meant to keep the colonized population weak and divided. Under colonial rule, while the colonial power enjoyed political and economic dominance, it also nurtured separate sets of political and economic elites among the local population. Often the local political elites were former members of the indigenous aristocracy, while the economic elites came from the migrant communities: both were, however, subordinated to the colonial rulers. With independence, this unstable situation changed. The political elites who were economically disadvantaged set in motion policies and programs to redress this imbalance and, in the process to bring about long-term political, economic, and social equality. The affirmative action programs of Malaysia can be understood only in this context.

## 2.5 HISTORICAL BACKGROUND: MALAY SPECIAL RIGHTS

The concept of Malay Special Rights originated with British colonial rule in the Federated Malay States in 1874. It is one of the ironies of history that the concept of special rights to protect the Malay community is, in a sense, not Malay in origin. For it was the British, through a system of indirect rule, who established the

idea. British authority was introduced into Malaya (currently Peninsular Malaysia) through treaties signed with the Sultans of the individual states. Thus, right from the beginning, the obligations of the British authorities were primarily to these sultans and their Malay subjects. The philosophy underlying this approach was that even though colonialism was imposed on Malay, the myth that Malays were still the rightful owners of the country was partially upheld by granting them special status and "protection." There would be two layers of "protection": the Malay rulers, who would continue to "protect" their Malay subjects, and the British colonial government, who would "protect" the interests of the Malay rulers and the population. To the British, "protection" meant recognizing the states with which they had concluded treaties as sovereign Malay States where authority was vested in the sultans (Parkinson, 1964: 333). Indirectly, it meant protecting the status of the sultans and their Malay subjects - protection which in time, was translated into specific policies for the community (Pillay, 1974: 1). Of course, since indirect rule was a mere euphemism designed to cloak what was for all intents and purposes a colonial situation, Malay authority must be seen as nominal and symbolic. Rupert Emerson (1964: 496) in

Direct and Indirect Rule, has shown that in reality it was the British colonial civil servants who ran the administration "in which native sultanates with their aristocratic appendages have been allowed to continue their existence on a side-track". Viewed from this perspective, the British concept of protection can be described as an "ideology," in the sense in which Mannheim (1966:49) defines it "as more or less conscious disguises of the real nature of a situation, the true recognition of which would not be in accord with his [the advocate's] interests." Certainly, this protectorate system was a "conscious disguise" for a "situation" in which the sultanates had lost their sovereignty and the Malay elites had no authority. In yet another sense, according to Mannheim (1966: preface), the purpose of an "ideology" is to "direct activities toward the maintenance of the existing order." The protectorate was clearly aimed at perpetuating British rule, since keeping the Sultans as figureheads helped to endow the colonial administration with an aura of respectability and legitimacy.

The full weight of this obligation was made manifest only with the arrival of vast numbers of Chinese and Indians, who supplied most of the manpower for the country's unprecedented economic development. The British

found it necessary to assure the sultans that the influx of non-Malays would not be allowed to affect their positions, or that of their subjects, adversely. Politically, a policy of indirect rule was to guarantee this; economically, it was pointed out that the revenues resulting from the new leap in economic activity would be used to introduce better social services from which the Malays themselves would benefit (Ratnam, 1965: 143).

This policy of preserving Malay rights, and of effectively excluding non-Malays from the country's political life, was fairly uncomplicated as long as the non-Malays constituted only a transient population which regarded Malaya as a foreign country, ideal for a profitable sojourn. But the 1930s and 1940s changed the basic character of these communities: they now became a part of the settled population, seeking local rights and a share in local politics. With this change, the question of special Malay rights ceased to be a matter of simple administrative policy, and instead became a live political issue.

The old policy of strictly and effectively maintaining the special position of the Malays was now placed in direct conflict with the need to make concessions to the non-Malays. Thus was introduced the

present era of changing definitions regarding how "special" the special position of the Malays should be. Political advancement introduced further complications, in that the introduction of wide democratic measure (such as the liberalization of citizenship qualifications, the introduction of elections, and so on) made it progressively more difficult for special rights to be reserved for a single community; yet the same political advancement made the Malays more dependent on guaranteed rights, because it made their position in the country less secure.

The Malayan Union scheme designed by the British after World War II represented a complete abandonment of the pre-war policy of recognizing "Malaya as a Malay country". Indirect rule was to be abandoned for the sake of a centralized and potentially democratic administration with equal citizenship rights "to all persons, irrespective of race or creed, who were born and resident in the new political union" (Ratnam, 1965). Out of this consciousness, the United Malays National Organization (UMNO) was created in the first Malay Congress, in March 1946. Within the fold of this movement were 41 organizations headed by administrative and aristocrat Malays and supported by the sultans who successfully

opposed the Malayan Union. Notwithstanding their successful opposition to this scheme, the Malays found in the proposals of the Malayan Union a rude warning of what the future held for them; they could no longer take their privileged position for granted, as they had done before the war. Viewed from this angle, the interests of the Malay community as a whole were involved; from another, however, the Malayan Union was a specific threat to the interests of a particular group. This was the class of Malay administrators and aristocrats - the group that had reaped some benefits from colonial rule. The Malayan Union would mean the Sultans, the State Chief Ministers, and other traditional chieftains were going to lose their status and functions as a result of centralization of authority. Yet the Malay interests were also at stake. This enabled the leadership in UMNO to merge its own group interests with the larger cause of the community. Thus, right at its genesis, UMNO elites succeeded in defending their own position while protecting the Malay community.

The Federation of Malaya Agreement, which followed in 1948, made a half-hearted attempt to return to the pre-war policy. Although the special rights of the Malay community were once again given recognition, the claims of the non-Malays were not ignored. It was stated, for example, that

the responsibilities of the High Commissioner were to include the safeguarding of the "special position" of the Malays and the "legitimate interests" of the other communities (Vasil, 1980: 22). Together with the opening up of citizenship, this recognition that the non-Malays had "legitimate interests" in the country introduced a new phase in political thinking. The terms, "special position of the Malays" and "legitimate interests of the other communities" have since become entrenched in the country's political vocabulary and, because it was inevitable that the former should conflict with the latter, much of the country's politics in recent years has revolved around efforts to define "Special Rights" by the Malays on the one hand and the non-Malays on the other, aimed at benefiting their own interests.

As late as 1952, the "legitimate interests" of the non-Malays did not provide them with access to the Malayan Civil Service. They had, however, for a long time been admitted to the other branches of the Public Service where they, in fact, outnumbered the Malays. As stated by General Sir Gerald Templer (High Commissioner from 1951 to 1954), in a speech to the Legislative Council in November 1952, the non-Malays outnumbered the Malays in the First Division of the other branches of the Public Service



(excluding the Police) by 235 to 91 (Federation of Malaya, Report of the Proceedings of the Legislative Council, November 19-22, 1952, p. 473, cited from Ratnam, 1965, p. 105). It was in the same speech that General Templer stated the policy which was to follow, of admitting qualified non-Malay Asians to the Civil Service in the proportion of one non-Malay to every four Malays, and of reserving a certain quota of licenses (for certain businesses) and scholarships for the Malay community. This proportion reflected that of Malays to non-Malays, which in 1954, at the University of Malaya, was 73 to 452 (Ratnam, 1965: 106).

Regarding commerce and industry, General Templer thought it essential "that the Malays should be encouraged and assisted to play a full part in the economic life of the country so that the present uneven economic balance may be redressed" (Ratnam, 1965:106). Taken as a whole, the new proposals represented a compromise: the Malays were to lose their monopoly in the Civil Service, but were to enjoy certain economic and educational advantages.

The policy set forth by General Templer remained in force until 1957, when the attainment of independence necessitated a reconsideration of the entire issue of special Malay rights. Since the implementation of the new

constitution was now to be left entirely in the hands of the Malays and non-Malays, the need for a workable compromise was more vital than ever before.

With the introduction of elections in 1952, the issue of Malay special rights became the object of much political dispute. For the first elections, the three largest communal parties had joined forces to contest elections and field a single slate of candidates. Together, the United Malays National Organization (UMNO), the Malaysian Chinese Association (MCA), and the Malaysian Indian Congress (MIC) formed what came to be called the Alliance, similar to Lijphart's consociational model for elite accommodation in multi-ethnic nations (Lijphart, 1977). This coalition quickly eclipsed all its rivals to dominate the political scene, and in 1955 it captured all but one of the seats in the first federal elections. Although the Alliance had been formed as a united front to win elections, once in office it was forced to seek agreement among its partners and resolve the difficult communal issues by negotiation among the leaders of the three partner parties. Alliance policies were worked out either through informal agreements among its leaders or within the structure of the Alliance National Council. In either case, the negotiations were always secret, and the

agreements or compromises were seldom revealed to the public except in the form of subsequent government policy statements. Government policy on Malay special rights was but one of a series of complex compromises on a variety of communally sensitive issues. To understand the politics of special rights, it is necessary to consider the factors in communal bargaining and the political calculations of the Alliance leaders.

The Malays were recognized as having a fundamental stake in the political system, while the non-Malays were assumed to be concerned primarily with their dominant position in the economy of the country. In effect, the communal compromises involved some trading of economic power for political power, with the objective of equalizing the disproportionate distribution of power and wealth. Thus, communal compromises worked out within the Alliance involved policies designed gradually to increase non-Malay participation in the political system at the same time that Malays were to be given a greater stake in the economy. The Alliance leaders never made clear whether their ultimate objective was to eliminate, or merely to reduce, the gross inequities of ethnic distribution of economic and political power.

The demands of non-Malays for increasing political participation were met by the acceptance of the principle of *jus soli*, whereby everyone born in Malaya after independence would be counted as a citizen. Citizenship could also be obtained by naturalization through meeting residence requirements (five to eight years), taking the oath of allegiance, and exhibiting proficiency in the Malay language (Malaysian Constitution, Article 14-23).

Malay special rights occupied a peculiar place in the communal compromises, since they were designed both to improve the economic position of the Malays and to ensure the latter's dominant role in the political system. Malay special rights were thus perceived by many Malays as a key to their political control of the country and their economic advancement. For this reason, the perpetuation and expansion of Malay special rights became a primary demand of Malay politicians. The non-Malays were told, however, that special rights were necessary only because of the Malays' inferior economic condition. It was implied that when the Malays achieved economic parity with the non-Malays, special rights would be "considered" and presumably eliminated as "no longer necessary." Thus, through the years two contradictory sets of expectations have been generated among the Malays and the non-Malays:

Malay rights have been perceived as temporary and transitional by the latter, and permanent and "inalienable" by the former.

In the constitution which took effect upon Malayan independence in 1957, Malay special rights received specific constitutional sanction and protection. Article 153 authorizes a mechanism "to safeguard the special position of the Malays" through a system of quotas applied to public service, to scholarships, to "training privileges," and to licenses for any trade or business. Article 89 sanctions the system of Malay Reservations, and permits the state legislatures to add to the land area declared a Malay Reservation.

To ensure that the operation of the democratic process would not erode or terminate Malay special rights, Malays were given a unique constitutional status. Article 153 begins, "It shall be the responsibility of the Yang Di-Pertuan Agong (the King) to safeguard the special positions of the Malays and the legitimate interest of other communities ...". Similarly, approval of the Conference of Rulers is required for any change of policy relating to the "special position of the Malays" and "Malay rights" as defined in Article 153, and any amendment to Article 153 requires the assent of the

Conference of Rulers (Constitution - Amendment - Act of 1971). As a consequence, these provisions make Malay special rights as defined in Article 153 and other articles pertaining to the special position of the Malays, more difficult to amend than the constitution itself.

It is interesting that the Constitution embodies the "bargain" struck among the leaders of the UMNO, MCA and the MIC, and that it sets out the political framework, or rules, within which the racial groups are to operate. The bargaining process had its roots in British encouragement of the leaders of the main communities to work together in the Communities Liaison Committee to counter the armed violence of the Malayan Communist Party. The early leaders of these political organizations were English educated. The leaders of the UMNO were primarily wealthy aristocrats, while those of MCA and MIC were wealthy businessmen.

At first sight the existence of Article 153 appears strange. Why was a constitutional provision necessary to protect the Malays when they were the largest racial group and thus constituted a majority of the electors? Different answers can be given: the Malays, being "indigenous," should have special consideration; the rights were already there under the British and should not

be terminated; the rights were a trade-off for the concessions to the non-Malays on citizenship; and they were needed to enable the Malays to achieve a greater degree of economic equality. The first two reasons are sometimes assumed implicitly rather than stated explicitly. The third and fourth are not contradictory: one refers to the bargaining process, the other to objectives.

## 2.6 PREFERENTIAL POLICY IN EDUCATION

Since the socioeconomic structure of Malaysia is racial, it is not surprising that politics, responding to this reality, is organized on this basis, too. The "Bargain of 1957" between the elites of UMNO, MCA and MIC regarding the trade-off granting special rights to Malays and citizenship to non-Malays, and the understanding of the division of economic and political power between these two groups, began to take its toll in the 1969 election, the fourth national election. The Malays, seeing that after almost a decade after independence their economic status had not improved while the non-Malays had a much stronger grip on the private sector, organized two Bumiputra Economic Congresses, in June 1965 and September

1968. These two congresses can be regarded as the most important events challenging the government to implement the Malay Special Rights Program with greater speed and zeal for Malay economic and social development (Mah, 1985: 257). Many Malays believed that their relative income was worsening, and that the development was benefiting only the non-Malays. The Chinese in particular, who had dominated large-scale commercial agriculture and non-agricultural enterprises (Snodgrass, 1980: 53), realized that political power was necessary to safe-guard their economic interests. The Malay opposition party, the Pan-Malaysian Islamic Party, began the political campaign with the slogan that UMNO had "sold" the Malays to the Chinese (Milne, 1980). Another opposition party, the Democratic Action Party (DAP), a Chinese majority party, was demanding equal rights for all Malaysians.

As it turned out, the cumulative effect of these grievances had been underestimated by everyone, including opposition party leaders. When the vote was counted it was found that the Alliance had suffered a crippling setback. It lost 22 seats in the Federal Parliament, experienced sharply reduced margins everywhere, and dropped to the status of a minority party with only 49.1% of the popular vote. By far the heaviest blows were absorbed by the MCA,



which lost 14 of its 27 seats, including all the constituencies which it held in major urban areas. UMNO had a net loss of seven seats while the MIC retained two of its three seats by tiny margins.

As far as one can tell, it was the outcome of these elections which led to the severe racial violence which broke out in Kuala Lumpur on the evening of May 13, three days after the election. In all, 196 people died, according to the official report - - rumors put the number of deaths much higher - - and many shops and homes were destroyed (Comber, 1983). The country's previously good record of avoiding racial violence was badly marred. Worst of all, its carefully constructed and hitherto efficient political machinery for coping with communal differences had all but been destroyed by the election and its aftermath.

To assist in restoring order, a State of Emergency was declared on May 14, 1969. An appointed body, called the National Operations Council (NOC), was established to manage the emergency.

The appointed members of NOC, who represented UMNO, MCA and MIC, realized that to return to parliamentary government, a changed set of rules must be adopted and agreed upon. The new rules were intended to reduce the

chance of future violence by more deeply entrenching the "Bargain of 1957" and removing the main elements of that bargain from the arena of political debate. When Parliament was reconvened it was instructed to pass a series of amendments to the Constitution and to the Sedition Act. Among other things, these forbade anyone to question the position of the Malay rulers, the use of Malay as the national language, and the "special position" of the Malays (Malaysia, 1971).

Many people, both Malays and Chinese, argued that economic factors constituted an important part of the problem. The slow growth of the economy since 1965 had contributed to the worsening of unemployment. Even though the unemployed were mostly Chinese and Indians, the slack labor market made it more difficult for the Malays in general, especially the Malay migrants to the towns, to find jobs. Malay youths were now completing secondary education in significant numbers. Between 1957 and 1967 the total assisted secondary school enrollments leaped from 80,602 to 414,323, an increase of 414.0%. Within the English and the Malay schools the increase was more spectacular: in the former, the ten-year period registered nearly a six-fold increase; in the latter, more than fifty-fold. Between 1967 and 1975 the English schools

showed a further increase of 133,800 (46.7%) and the Malay schools 166,763 (130.2%)(see Table 2.1). They were often frustrated at not receiving either of the major benefits bestowed on secondary school leavers in the past: urban white-collar employment or admission to higher education. Growth in the number of good jobs had not kept pace with enrollment expansion, while access to higher education was often blocked by inferior educational preparation and lack of facility in English (Chan, 1977).

Certainly these and other socioeconomic problems did exist, and offered grounds for concern regardless of whether they contributed to causing the riots. Those who agreed that there had been a major cause divided when it came to prescribing a remedy. Two broad groups emerged, one endorsing the past lines of economic policy but arguing that implementation had been too sluggish in the past, and the other calling for major increases in intervention in the economy to benefit the Malays, if necessary at the cost of economic growth. The latter approach was adopted.

Table 2.1  
ENROLLMENTS IN ASSISTED SECONDARY SCHOOLS

Year	English-medium	Malay-medium	Chinese-medium	Total
1957	48,235	2,315	30,052	80,602
1960	72,499	4,953	38,828	116,280
1961	84,347	8,158	37,793	130,298
1962	119,217	13,224	Nil	132,441
1963	135,233	19,910	Nil	155,143
1964	151,386	28,067	Nil	179,453
1967	286,254	128,069	Nil	414,323
1970	339,961	128,143	Nil	468,104
1972	370,289	177,941	Nil	548,230
1975	420,054	294,832	Nil	714,886

Note: Educational Act of 1961 abolished the government aided Chinese-medium secondary schools.

Source: Malaysia, Ministry of Education, Educational Planning and Research Division, Kuala Lumpur.

The actions which the government took in the economic field after May 1969 were, as usual, conditioned by the need to make political compromises: the "government will ensure that no particular group will experience any loss or feel any sense of deprivation. It promised to eradicate poverty irrespective of race" (Second Malaysia Plan, 1971:

1 and 43). It promised to enlarge "the economic-pie" to accommodate the increased Malay portion without depriving others.

This is what Premdas (1986) terms the segmental accommodation model, whereby the communal segment elites seek a formula for sharing power and the benefits of official administration so as to maintain a minimum measure of democracy and order. In the State of Emergency and with Malay elites holding a majority in the National Operation Council (NOC), i.e., 9 Malays and 3 non-Malays, the Malays had hegemonic control. In the model, only selective sharing of resources with subordinates takes place, usually as an incentive for compliance with the system of ethnic hegemony. Bargaining is not the style adopted for settling claims, except when the system of ethnic dominance begins to crumble. To bargain with subordinate segments is to open the door to the loss of control of "the rule of the game" (Milne, 1980: 172).

Predictably, a new round of Malay "special interest" economic programs appeared in the months following the riots. An Urban Development Authority (UDA) was established to speed Malay entry into urban commerce, as well as to perform other urban planning functions. Pernas (the National Corporation), established in 1970, was

empowered to purchase existing businesses, found new ones and enter into joint ventures. State Economic Development Corporations (SEDCs) were established by all the state governments, largely as a response to grassroots pressure for action to assist the Malays. Unlike their predecessors, these programs focused mainly on urban, non-agricultural activities. This reflected the gradual change in Malay interests and ambitions during the 1960s. The changes came to be known collectively as the "New Economic Policy" (NEP).

A direct result of the riots was the promulgation of the NEP, based on the philosophy articulated at the First Bumiputra Economic Congress (1965) which recognized the limitations imposed by a laissez-faire economy in promoting the development of a disadvantaged class. The Congress specifically proposed increased government intervention and regulation to promote Malay economic interests, a strategy which found expression in the explosion of public enterprises after 1970.

The riots forced the Alliance government to reconsider its laissez-faire economic philosophy and strategy of consociational politics, and resulted in the following changes:

- (a) Constitutional amendments which, inter-alia, further strengthened the status of Malay Special Rights.

- (b) The promulgation of the New Economic Policy which gives added vigor and clearer guidelines to improve the economic lot of the Malays. Two objectives were spelled out in the Second Malaysia Plan: the eradication of poverty, and the restructuring of the economy so that Bumiputras would have at least 30% employment in, and ownership of, the economy by 1990.
- (c) The realignment of political parties through the cooptation of opposition parties into a broad coalition called the National Front, under the hegemony of UMNO.

Preoccupation with economic factors and the redistribution of wealth to reduce inequalities among ethnic groups does not, of course, imply that education has been relegated to a minor role. On the contrary, it is implicit that education will continue to play a key role in the restructuring of Malaysia's plural society. It is clear from the above discussion that education has been consciously used as the instrument to sponsor and accelerate the social and economic mobility of the people. What is even more important, and what makes education much sought after, is the high correlation found between the level of educational attainment and the occupational level in many societies (Tumin, 1961; Clignet and Foster, 1966; Woronoff, 1981; Syed Husin, 1975).

The policy implication of the findings of Tumin, Woronoff and sociologists who argue that vertical mobility is highly dependent upon the level of formal

education attained, is that formal educational opportunities should be expanded and made more readily accessible to all, particularly the poor, if a more egalitarian society is desired.

In the late 1960s, when the frustrations of the increasing numbers of Malays emerging from secondary schools were apparently rising to a peak, demands were voiced that a quota system, reflecting the ethnic distribution of the country's population, be applied to enrollment in the University of Malaya (Chan, 1977: 49). This concern and frustration among the Malays was due to the continued retention of the English language at the higher levels of education. It was even viewed as a form of institutional discrimination against Malay students who chiefly attended the national schools, which had adopted Malay as the medium of instruction. Since the language of instruction at the university level was English, the chances of entering the institution favored those who attended the English medium schools. For historical and geographical reasons, it was the non-Malay communities who benefited most from the English school system. With this development in education, it was inevitable that they monopolized the enrollment of the university of Malaya, the only institution of tertiary



education offering degree courses up to 1969, at least during the first ten years of the university's existence. (1959-1967). This is evident when one analyses the ethnic composition of the university's student population between 1959, when it was first established, and the 1967-1968 academic session. During this period, the number of Malays entering the university was 4,758 as against the total enrollment of 13,527. This constituted only 26%, as compared to the non-Malays' share of 74% (see Table 2.2).

Table 2.2

NUMBER OF STUDENTS ENROLLED IN THE UNIVERSITY OF MALAYA  
BETWEEN 1959-1960 AND 1967-1968 ACADEMIC SESSIONS

Academic Year	Malays		Non-Malays		Total
	No.	%	No.	%	
1959-1960	62	19.2	260	80.9	322
1960-1961	144	22.1	509	77.9	653
1961-1962	217	21.5	793	78.5	1,010
1962-1963	274	20.4	1,067	79.6	1,341
1963-1964	368	20.6	1,378	79.4	1,736
1964-1965	543	24.4	1,682	75.6	2,225
1965-1966	721	25.4	2,114	74.6	2,835
1966-1967	1,038	28.8	2,565	71.2	3,603
1967-1968	1,401	30.7	3,159	69.3	4,560
<b>Total</b>	<b>4,756</b>	<b>26.0</b>	<b>13,527</b>	<b>74.0</b>	<b>18,283</b>

Source: Abdul Majid Report, 1971. Figures derived from Table 1, p. 31.

In terms of output of Malay graduates in science and technology, the inequitable state of affairs is reflected by the fact that during the period 1964-1970, out of total output from the University of Malaya of 2,337 graduates, there were only 119 Malays, representing 5.1% (see Table 2.3).

Table 2.3

CUMMULATIVE OUTPUT OF MALAY GRADUATES IN SCIENCE AND TECHNOLOGY AT THE UNIVERSITY OF MALAYA, 1964-70

Faculty	Total number graduated (all ethnic groups)	Malay graduates Number	%
Agriculture	216	39	18.0
Engineering	366	3	0.8
Medicine*	129	12	9.3
Science**	1,626	65	4.0
Total	2,337	119	5.1

\* The Faculty of Medicine was established in 1963, and the first class of doctors graduated only in 1969.

\*\* Includes the major fields of Biology/Zoology/Botany; Chemistry/Biochemistry; Physics; Mathematics.

Source: Malaysia, Report of the Committee appointed by the National Operation Council to study Campus Life of Students of the University of Malaya, p. 44.

The increase of students from the Malay-medium secondary schools reached a critical point in the University of Malaya when, impatient with what appeared to the Malay Language Society to be foot-dragging in the implementation of the National Language policy, a demand was made on the university administration to clarify its stand. Unfortunately, this developed into a confrontation between members of the Malay Language Society and members of the University of Malaya Students' Union, who were mainly English-educated students. This confrontation came close to a race riot. This incident, and the imbalances in Malay student representation at the University, heightened the frustrations of the Malays, some of whom allege that they had been discriminated against in the selection of students for admission to those faculties where Malay representation was low.

To rectify the ethnic imbalances at the University of Malaya, the National Operation Council (NOC) appointed the committee to study the campus life of the students at the university and make recommendations for further actions. The Majid Report (1971), named after the chairman, Abdul Majid Ismail, made the following recommendations, which are here quoted in full because of their importance not

only to the university but later as the basis for preferential policy in higher education:

- (a) ... the university should decide and state clearly that it is the university policy to ensure as far as possible that the racial composition of the student population not only in the university as a whole but on a faculty by faculty basis should reflect the racial composition in the country. We are conscious that this policy cannot immediately be implemented in full in all the faculties. But we believe it to be important to have such a categorical declaration of policy. It will remind those responsible for admission to the various faculties of the objectives which should be met as far as possible. It will also help to allay any uncertainty in the minds of staff, students, as well as the general public and to avoid accusations of bias and discrimination directed at the different faculties.
- (b) The university's authorities should ensure that faculties with poor Malay representation ... should make every conscious effort to obtain the admission of Malay students. It is clear to us that there were more Malay students that had the required qualifications than were admitted. They could have, therefore, been admitted if the University authorities had been clearly directed to provide for a proper racial balance in the different faculties.
- (c) In each faculty, students who came from rural areas where the facilities for the study of science are limited should be given special assistance and tuition ... Turning to the criteria for admission, we wish to state first of all that the criteria should not only be of an academic character. We are in full agreement about the need to maintain academic standards ... However, we do not regard our recommendation here as in any way at variance with the need to maintain the current high academic standards achieved by the University. It is a fact that those living and educated in the rural areas are educationally under-privileged. Their full potential cannot be known on the basis of the HSC (Higher School Certificate) results alone.

- (d) We therefore recommend that the criteria for admission should include other factors besides the HSC results and that the University authorities should give weight to those from the rural areas.
- (e) We recommend that the scholarship awarding authorities should award more scholarships in the sciences to Malay students in order to rectify the present racial imbalance in these faculties.

With reference to the first and second paragraphs, it is clear that the Committee emphasizes the increasing size of Malay students in the total enrollment and those science related faculties to reflect population composition: 55% Malays and 45% others. The fourth paragraph specifically refers to the need for giving special weight to those from the rural areas, i.e., the low socioeconomic status Malays.

NEP is aimed at restructuring the society so that the existing identification of race with particular forms of economic activities will eventually be eliminated. The plan outlines programs to modernize rural life, provide rapid and balanced growth of urban activities, and, above all, ensure the creation of a Malay commercial and industrial community in all categories and at all levels of operation, in order that within one generation Malay and other indigenous people can be full partners in the economic life of the nation.

The government will participate more directly in the establishment and operation of a wide range of productive enterprises. Besides providing leadership in the articulation and achievement of the objectives of the NEP, the government will assume an expanded and more positive role than in the past.

Explicit and deliberate efforts by the government will be required to enable significant numbers of Malays and other indigenous people to gain experience and to have greater access to commercial and industrial opportunities.

One of the tasks given to education is to meet the manpower needs of the country, and in the case under discussion, to provide adequate Bumiputras to meet the goals of the NEP. To achieve the desired patterns of restructuring by 1990, Malay employment in secondary and tertiary industries will have to grow by 7.5% and 5.8% per annum respectively over the years (Third Malaysia Plan, 1976: 77). These targets imply that Malay employment will have to account for as much as 66% of total new employment in industry, and 54% in services during 1970-1990 (Third Malaysia Plan, 1976: 77). In other words, the absorption of the Malays and other indigenous people in the manufacturing sector will have to be sustained at a high rate. A major policy implication for educational

planning is that sizeable increases in the production of scientific and technical personnel at both professional and sub-professional levels are needed. In absolute terms, some 57,000 additional scientific and technical Malay personnel are needed at the degree level, and 81,000 at the diploma level between 1975 and 1990 (Third Malaysia Plan, 1976: 70).

To meet these needs within five years, 1969-1974, four new universities were established - the University of Science (1969), the National University (1970), the University of Technology (1973), and the University of Agriculture (1974). Enrollments in tertiary education showed a rapid increase of 136.6%, from 13,324 students in 1970 to 31,529 in 1975 (Third Malaysia Plan, 1976: 387). Another step taken by the government was a vigorous intervention approach to increase Malay and other indigenous representatives in higher institutions. In 1970, there were only 3,237 (40%) Malay students in the local universities. By 1975, the number reached 8,153 (57%) and in 1980, it was 13,857 (67%) (Fourth Malaysia Plan, 1981: 352). By the mid 1970s, the problem was not simply one of increasing the number of Malay students in universities; the concern also encompassed the fields of study. To create a viable Malay industrial and commercial

community, students needed training in science, technology and business. Malay enrollment had increased in these fields of study, from 384 (12%) in 1970 to 2,342 (29%) in 1975. Antagonistic reactions to the government's direct interference in the admission policy of the local universities became a political issue in the 1974 general election. Following that, the government responded by announcing, through the Minister of Education, that "the percentage differences in Malay and non-Malay intake would be gradually narrowed by two percent each year until the objective of 55% Malay and 45% non-Malay composition was achieved in all fields of study (New Straits Times, Nov. 14, 1980). The ratio is also applied to the teaching staff.

The recommendations of the Majid Report of 1970, and the New Economic Policy, 1970-1990, marked the second era of implementation of "Special Rights" for the Malays. The first was during the British rule and the first ten years of independence. The lack of affirmative action in the first period forced the Malay leaders to implement the Rights vigorously.



## Chapter III

### THE MALAYSIAN SOCIETY

#### 3.1 INTRODUCTION

Sociologists of different political persuasions unanimously agree that all societies are stratified into different social classes. The criteria used for this social stratification may, however, be different. For example, Karl Marx held that the class position of an individual is determined by his location in the production process, or by his relationship to the means of production. Thus, in a society where the capitalist mode is the dominant mode of production, those who own the instruments of production, employ wage labor and appropriate the surplus created by them constitute the class of capitalists while, those who do not own any means of production except their labor power and who are forced by economic circumstance to sell their labor power to the capitalists constitute the working class.

Weber, however, presented a different set of criteria to stratify societies. He used three variables, i.e.,

property, power and prestige to divide societies into their different social groups. According to him:

"Property differences generate classes; power differences generate political parties; and prestige differences generate status groups or strata" (cited from Tumin, 1967).

All stratified societies are theoretically either open or closed, although in reality all societies lie somewhere on the continuum from open to closed rather than at one extreme or the other. Societies are open if there is plenty of room for vertical social mobility, as many Western democratic capitalist societies claim. Societies are closed if such social mobility is restricted if not altogether non-existent, as in the traditional caste society of India.

### 3.2 THE MALAYSIAN SOCIETY

The Malaysian social formation is a recent and complex phenomenon which came into existence as a direct result of colonialism. In the pre-colonial period the Malay Peninsular was politically divided into a number of small sultanates based on the control of river basins (Gullick, 1958), while the northern part of the island of Borneo was inhabited by a series of tribes and came under

the sway of political entities based upon Sulu and Brunei at various periods. Social formations thus existed under semi-feudal and lineage modes of production, but these formations were of a scattered and fragmented nature and in no way resembled the modern Malaysian state in their precise extent or in the delimitation of their political boundaries. These formations were, however, the arenas in which the penetration of capitalism occurred particularly during the late 19th and early 20th centuries.

This penetration of the capitalist mode of production was uneven and restricted; thus while parts of Malaysia became fully integrated into the world market under the sway of plantation and mining capital, other areas remained virtually untouched (Emerson, 1937). The penetration of capitalism was accompanied by the establishment of a British colonial state but the influence of this political apparatus was again varied and the Malay peninsular and northern Borneo were administered under a complex and confusing array of different political units.

However, the articulation of several modes of production created by imperialist penetration gave rise to a complex, multi-racial social formation characterized by rapid economic growth, large-scale immigration,

rootlessness, a lack of social cohesion and the general atmosphere of a frontier society. The composition of the population was changed radically in a short space of time as imperialism ensured that labor was shifted from India and China to create surplus value on the basis of British capital. Thus by the Second World War a society had been created which appeared to be a vast medley of peoples which on the one hand "mixed but did not combine" (Furnivall, 1948), while on the other hand was divided into discrete ethnic blocs composed of Malays, Chinese and Indians. The official ideology of the colonial state which presided over this arrangement was that its task was to maintain an harmonious, plural society (Brennan, 1982: 189).

The image of harmony and consensus which was cultivated by the British and latterly their heirs in the immediate post-independent period was rudely shattered by the traumatic experience of the 1969 race riots, an experience which has set in train a series of social, economic and political policies.

In order to understand Malaysian society, it is necessary to consider a few important characteristics. To begin with, in Malaysia, the main criterion in stratification is ethnicity, but it is linked with two

other issues that are no less important, namely class and national development (Syed Husin, 1984). The relationship between ethnicity and class is close and both are related to national development. Not only has the process of development through time led to the emergence of ethnic and class groups, but also ethnicity and class can determine the nature of development and its effects on a particular society, community or group.

Ethnic relation in Malaysia have their own characteristics, quite different from those existing in other countries. First, the groups concerned may be more appropriately referred to as ethnic rather than racial. Ethnic groups are based more on socio-cultural factors, racial groups more on physical ones. The various ethnic groups in Malaysia actually belong to the same racial stock. For example, even though the Malays and the Chinese display certain different physical features, they are in fact classified within the same racial category, Mongoloid. The situation is different in the United States and more so in South Africa, where Whites (Caucasoid) and Blacks (Negroid) clearly belong to different racial stocks.

Second, each ethnic group is not and cannot be regarded as homogeneous, socially, economically or

politically. Socially, each group is divided into smaller sub-groups which differ from one another, though sometimes not very distinctly. There are also other sub-groups that can be distinguished from one another by the different economic and political functions that their members perform. Some of these differences are manifested in the form of class. The division of each ethnic group into different classes has significant implications for ethnic and class relations. On one hand there exist common class interests that stretch across different ethnic groups, although these common interest are not accompanied by a common class consciousness or solidarity among those in similar socioeconomic positions. On the other hand, there does not exist a situation in which an ethnic group is made up entirely of one class to such an extent that inter-ethnic and inter-class relations become one and the same. In other words, there is no ethnic group that constitutes either the exploiting or the exploited class as such.

Third, the ethnic situation that now prevails does not take the form of majority-minority relations, whereby one group is not only larger but also more dominant than the other. There exist many ethnic groups in Malaysia; before the formation of Malaysia in 1963 the main groups

consisted of Malays, Chinese and Indians, but afterward the ethnic composition became more complex with the inclusion of such indigenous ethnic groups as the Dayaks, Iban, Kadazan, and so forth, from Sarawak and Sabah. These ethnic groups differ in size, each having different degrees of influence and power over different domains.

Fourth, many forms of tension and conflict exist in ethnic relations in Malaysia. These occasionally erupt into riots and killings, as occurred during the May 13, 1969 incident. Yet such incidents have often been successfully controlled within a confined space and time (Ibrahim Saad, 1980). Feelings of frustration and discontent are always present among various ethnic groups, no matter whether they are big or small. Very often they are voiced by a variety of ethnic educational institutions, cultural and welfare organizations as well as political parties that are communal in practice (Comber, 1983). Such feelings have, fortunately, not developed into powerful social and political movements that are separatist in nature.

Ethnic problems can be said to exist in many parts of the world - - in developing countries that were once under colonial rule, as well as in developed countries of the West. Ethnic conflicts in Sri Lanka, India, Canada and the

Soviet Union are some examples. Sometimes in certain developed countries, like Britain, ethnic or racial conflicts have been known to be more acute and violent than those that have occurred in developing countries. Yet this fact should not lull us into the false belief that the ethnic problem in Malaysia is more exaggerated than real. The problem is indeed serious; the root cause and the social structure that permits it are still strong.

The Government has taken many steps, especially in education and the economy, to promote ethnic understanding and national unity. In many ways it has increased opportunities for more people in these fields and improved their standard of living. However, even before old problems could be solved, new ones have emerged. For instance, while poverty still persists, socioeconomic inequity has increased (Jomo and Ishak Shaari, 1984). The core poverty group is still sizeable and shrinking too slowly, while at the same time the wealthy group is increasing rapidly in size, as a result of rapid economic development and the policy of promoting the growth of the middle classes. The poor live in both rural and urban areas; they and their families cannot enjoy the benefits that economic development and good educational and health facilities can provide (Jomo and Ishak, 1984).



At the same time, government development programs have given rise to new social groups and conflicts within society. Political, economic and educational changes have accelerated the emergence of new middle class groups that find themselves in conflict with traditional upper class groups. Recently the country has been witnessing intense competition between these two classes in their determination to assert their respective domains of influence and power. Although on the surface the controversy centers around constitutional amendments such as the Education Act of 1961 and the National Language Amendment of 1967 (Mustapa, 1987), the underlying causes are political and economic rivalries. The traditional upper class, consisting of the Malay rulers and nobility, make use of their status in order to gain additional wealth and power, whereas the newly emerging upper and middle classes, consisting of administrators, businessmen and politicians, try to manipulate their newly acquired position for the same purpose. Although these conflicts have come out in the open and are being addressed, there is every possibility that they may ultimately lead to class conflicts which can have far-reaching effects on social change.

In fact, class conflicts have not yet occurred between the rich and the poor. Probably one of the reasons for this is that ethnic ideology and consciousness are still dominant and constrain the development of class ideology and consciousness. Very often discontents which are essentially class in nature are expressed in ethnic terms. In Malaysia today, both the ethnic and class forces pull society apart, in vertical and horizontal directions as it were, but at the present juncture of history the ethnic pull is more forceful and dominant. However, within each ethnic group socioeconomic differences have emerged, and ethnic dissatisfactions and conflicts voiced through educational, cultural and even religious issues may, if examined closely, be found to have a strong class basis.

Class analyses of Malaysian society are still comparatively rare but it may be useful to review some recent attempts at constructing a class framework before presenting our own formulation. Most writers agree that the peasantry and the urban proletariat constitute the two major dominated classes although there is disagreement as to the degree of differentiation and the various fractions which make up these two classes. Rather than focusing on these classes the tendency has been to concentrate on the ruling classes and the middle strata. This is partly

because a power struggle between the fractions within these classes is believed to hold the key to an understanding of the way that race is deployed in the political arena. Thus for Lim Mah Hui (1981) the Malaysian dominant class or power-bloc faces a crisis of hegemony in which there is a divergence between what he calls "political hegemony" and "economic hegemony". This divergence results in conflict between the three "fragments" of the dominant class which are the Malay governing class, the non-Malay (mainly Chinese) capitalist class and the metropolitan or international bourgeoisie. For Lim the metropolitan bourgeoisie is conceived of as an almost domestic class within the Malaysian social formation and its presence is measured by the degree of foreign control of the economy. However, it is doubtful whether the metropolitan bourgeoisie can be considered to be an indigenous class in that presumably foreigners cannot have any direct political representation although their interests can of course be politically represented through the local bourgeoisie.

In Hashim Hussin Yaacob's (1977) formulation the Malaysian ruling class is composed of the following groups: (a) a land-owning class exploiting the cheap labor in the countryside for the production of cash crops,

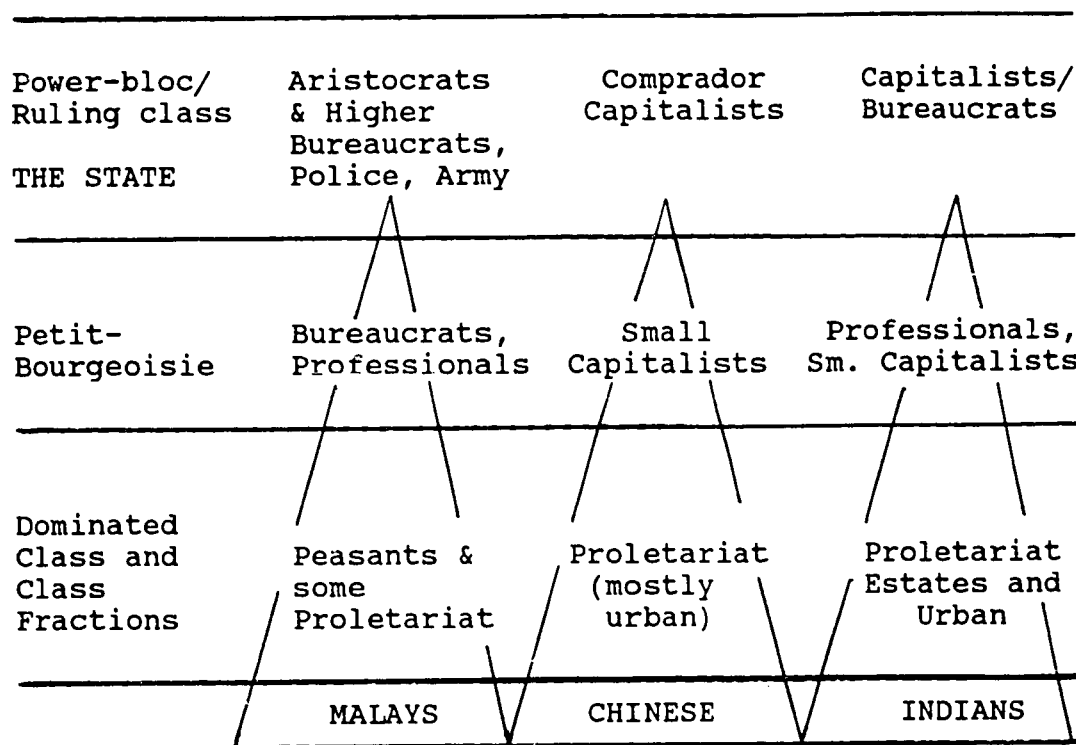
(b) former members of the aristocratic and noble families, (c) the owners of estates and mines and (d) a commercial group of financial and industrial magnates. Below the ruling class according to Hashim is a middle class which is of crucial strategic and political importance because it is pushing for greater political and economic power and utilizes race in order to gain support for its aims. This middle class is composed of (a) an urban commercial group, (b) the rural bourgeoisie (often teachers and government officials), (c) a bureaucratic class and (d) a technocratic/managerial class allied with the multinational companies.

Michael Stenson (1976) characterizes the Malaysian class system as one in which an urban aristocratic/administrative elite, a capitalist elite, a salariat and a rural landlord and administrative class face an urban proletariat and a mass of impoverished peasants, while for Selvaratnam (1974) the ruling class is composed of foreign capitalists, a bureaucratic and technocratic elite, the local bourgeoisie and the large landowners.

Although the emphases differ in the above formulations, all seem to be agreed that an alliance of local aristocrats, bureaucrats, urban capitalists and rural landlords is in collusion with foreign capital to

exploit and oppress the Malaysian peasant and worker. With the exception of Lim, the role of the state is left fairly vague although there is virtual unanimity that a bureaucratic or administrative class or elite exists and that it is of considerable and increasing importance. Nevertheless, there are indications that whilst a crudely instrumentalist view of the state as the executive committee of the bourgeoisie may have been replaced by the state as the "condensation of the balance of forces" (between fractions of the bourgeoisie) (Brennan, 1982: 190), there remains the conviction that in the last analysis the state represents the power-bloc. In Figure 1 we represent diagrammatically the class structure of the Malaysian social formation.

Figure 1. MALAYSIA: CLASS AND RACE STRUCTURE



Notes: Each racial group is divided into classes.

Source: Adapted from Brennan, 1982, p. 192.

The Malay Aristocracy is a significant fraction of the Malaysian ruling class with its origins deep in the pre-colonial period and the pre-capitalist mode of production. The important point about this fraction is that historically it possessed both political and economic power. Malay sultans collected tribute as a result of their political control over the river basins of the Malay peninsula (Syed Husin, 1975: 19). Much of their economic and most of their political power was stripped away during the British colonial period, but the aristocrats themselves were institutionalized and given special roles and privileges under the system of indirect rule. In short, they became dependent upon the colonialists in that they were the group effectively co-opted and utilized by the British in maintaining control. Independence came late to Malaysia partly because this group remained ambivalent about losing the protection of the British. When independence did arrive it was led and therefore controlled by the aristocrats themselves.

In the post-independent period this fraction has sought to recapture economic as well as political control thus harking back atavistically to the pre-colonial period when feudal rule was undisturbed by either the Europeans or the Chinese or Indian immigrants. An ideology has been

erected which is designed to legitimate the rule of the aristocrats by appealing to tradition, race and religion. This is the ideology of "nationalism" which sees the Malays as the only truly indigenous people of the peninsula owing unswerving allegiance to the Sultans, the Malay race and Islam. This Malay feudal fraction has not, however, been able to retain its power without forging alliances both with the rising Malay bureaucratic stratum of state functionaries and with dominant class fractions from other racial groups.

The penetration of capitalist relations of production into the rural areas of Malaysia during the colonial period naturally led to new forms of social differentiation. As land and labor became commodities for purchase and sale, a class structure evolved in the village based on the processes of exploitation and accumulation. The British introduced the concept of private property to replace the pre-colonial system under which land was owned by the aristocracy and operated by the peasantry on a fairly "free" basis, i.e., a peasant would work as much land they acquired and thereby began the integration of the Malaysian economy into the world economic system. Class formation in the Malaysian countryside has proceeded since the capitalist mode of



production was introduced in colonial times. A powerful land-owning class has emerged in the rural areas, a class which has been highly significant in political interventions (Stenson, 1980: 45-54). This landlord class has given the ruling United Malay National Organization (UMNO) its strongest support in rural areas and thus leading to class antagonisms and an electoral pattern whereby the poor peasants voted for the Malaysian Islamic Party, an opposition (Kessler, 1978: 165).

In Malaysia this bureaucratic fraction of the ruling class was originally created by the colonial power in order to service the needs of the colonial state. The members of this group were drawn from the ranks of the traditional Malay elite referred to above, and although initially barred from its higher reaches, they were eventually fully adsorbed into the colonial bureaucracy i.e., the Malayan Civil Service (MCS). This group became deeply involved in Malay nationalist politics and formed the backbone of the United Malay National Organization which came to power as the leading partner in the Alliance Government in 1957. Since independence the civil service has not been exclusively Malay, although recruitment policies have assured that Malays are in a majority. This trend has increased since 1969 with the proliferation of

new government organizations at the national and state level. The members of this bureaucratic class are now drawn from a wider social background than simply the aristocracy as a result of expanded educational opportunities and the possibility of rapid promotion for university-educated Malays. Other areas of the state apparatus which have identified with the dominant class and in particular with the state bureaucracy are the institutions of the military and the police.

As with other groups in the class structure of the Malaysian social formation, the comprador capitalists emerged during the colonial period. Composed mainly of Chinese merchants, small industrial capitalists and the owners of some mining and plantation capital, the comprador capitalists acted as middlemen between the giant British agency houses and the mass of workers and peasants who provided the labor from which surplus value could be extracted. Under the protection of the British whose official ideology was to keep the Malays in rice production, Chinese and Indian immigrants were encouraged to establish themselves in the intricate network of wholesale and retail activities which was necessary for the reproduction of the labor force and the smooth functioning of an economy geared to the export of mineral

and agricultural products to the metropolitan country. From the very start then, this fraction was reliant upon imperialist penetration, and as Taylor (1979) has pointed out, its political ideology and economic strategy is inevitably dominated by this fact. In contrast to a national capitalist fraction, this group will always argue for "the importance to economic development of the value accruing to the state from foreign investment in the export sector, the importance of linkage industries, the increase in profitability from the use of imported technology etc.". Historically this reliance upon foreign penetration has been exacerbated by the fact that the comprador fraction has been almost entirely non-Malay and therefore has come into conflict with those who control the state apparatus, mainly Malays. Because of this division no coherent "national capitalist class" has emerged in Malaysia, although there are signs that one could emerge as a result of the New Economic Policy (Brennan, 1982: 198).

During the 1950s this comprador fraction of the Malaysian bourgeoisie formed an alliance with the Malay aristocratic class so as to protect its interests as independence approached, and to provide a united front of local ruling classes and colonial power against the

liberation efforts of the Malayan Communist Party. In the event this triangular alliance of British colonial interests, the local non-Malay comprador capitalists and the Malay feudal class was outstandingly successful. In fact the struggles of the 1950s provided the basis for the continued rule of the Alliance, now the National Front, and the continued protection of this local power-bloc. The mainly non-Malay bourgeoisie has however been forced to adopt a racial strategy in order to legitimate its position with the non-Malay masses. The Malaysian Chinese Association (MCA), with membership open only to Chinese, emphasizes Chinese culture, language and education, as well as vertical clan and dialect group ties in order to persuade Chinese workers that the racial group should be the focus of their allegiance (Brennan, 1982: 213). This strategy has inevitably led to contradictions and conflict between the various fractions of the power-bloc and it is these intra-power-bloc struggles which have eventually surfaced as racial conflict.

A major feature of post-war Malaysian society has been the emergence of an urban petit-bourgeoisie. This class is composed of middle ranking bureaucrats, teachers, workers in the social agencies, professionals and small-scale capitalists mainly in retailing and contribution. It

is a multi-racial class although a certain congruence of race with occupation has occurred, i.e., Chinese in business and shopkeeping, Malays in government service. The expansion of the petit bourgeoisie is a result of capitalist economic growth providing increased opportunities in the professions, in industry and commerce, and of the increased role of the state providing employment in a vast range of government agencies.

The major feature of the Malaysian middle-class has been its unswerving support for the ruling class power-bloc. This is hardly surprising for its very existence is dependent on the patronage of particular racial fractions of the ruling class. Thus government employees are dependent upon government ministers and senior civil servants while given the highly integrated, clan-and-dialect-based vertical structure of Malaysian Chinese society, shopkeepers own allegiance to the large-scale Chinese capitalists. Because of this dependency but also through its growing influence derived from electoral politics, the petty-bourgeoisie has supported the Alliance party and pressurized the state to continue its pro-capitalist, anti-socialist and racialist policies in a bid to increase its own share of the cake at the expense of the mass of workers and peasants.

This is not to argue that in conditions of class polarization the petit-bourgeoisie will not mount a political alternative to the political representation of the power-bloc. This of course will be "social democracy" as witnessed by the rise of parties such as the Gerakan, founded by middle-class professionals in 1969, and the Democratic Action Party (DAP) that adopts a social democratic and pro-Chinese set of policies (Vasil, 1971). These parties basically support the existing order but challenge its implementation in terms of alleged racial hegemony and a maldistribution of the rewards of the accumulation process amongst fractions of the petit-bourgeoisie. A small minority of professionals and others will side with the proletariat and peasants as witnessed within certain fractions of the People's Socialist Party. But by and large, the Malaysian ruling class has been able to rely on the urban (and rural) middle classes in its support.

The dominated classes in the Malaysian social formation can be divided into three major fractions - the peasantry (mainly Malay and indigenous people of Sabah and Sarawak), a rural proletariat of plantation and mine workers (mainly Indian and Chinese), and a multi-racial urban proletariat. Given the articulation of several modes

of production and the uneven and restricted development of capitalism, this broad sub-division could be differentiated further, but for the purpose of analysis, we will focus on these three main groups.

The origins of the Malaysian peasantry lie in the semi-feudal mode of production established in pre-colonial times of the Malay feudal rulers. The majority of peasants are still Malay but their economic situation has been drastically changed by the penetration of capitalism into the rural areas of the country. Thus the sale of land and the introduction of cash crops has led to a situation in which:

"The Malaysian peasantry exhibits a distinct pattern of social differentiation and polarization. On the one hand there is a rich land-owning group who are also middle-men-wholesalers-creditors having farms of more than 10 acres in size, and on the other, there are many groups having less than that, and still others, about 60% who have no land at all." (Baharuddin, 1979: 443).

On the other hand social relationships between peasants, landless laborers and landlords are overlain by feudal and religious ideologies derived from the pre-capitalist mode of production. Thus a patron-client relationship exists in which:

"The landlord (patron) is free to choose who will operate his land, be it tenant, sharecropper or laborer. Since the amount of land in the village is

often small compared to the supply of labor, clients must depend on the landlord's 'kindness and goodwill' and oblige and support him, in order to retain their means of livelihood. This may take the form of supporting the landlord when he stands for election to the committee of any of the local social or political organizations. The result is the creation of a strong relationship of obligation and dependence between the patron and clients (landless peasants). The landlords are able to mobilize and influence the majority of the peasants, especially those who are operating their land, thus determining to a certain extent the socio-political behavior of the landless peasants (Baharuddin, 1979: 444).

In our discussion of the tenant-landlord class, UMNO has attempted to institutionalize this patron-client relationship into one of political allegiance. A trump card in ensuring the support of the peasantry for the ruling Malay elites has been race. By drumming up fear of the 'immigrant races' and appealing to a crudely populist Malay nationalism, the Malay ruling class has been able very effectively to keep race consciousness high and class consciousness low. This job has been made all the easier by the fact that the majority of Malays are concentrated in the countryside while the Chinese and Indians reside in the towns. Secondly through its control of the repressive state apparatus, UMNO has been able to harass a class-based political party like the People's Socialist Party and prevent its political message from getting across.



The export of tin and rubber was the basis on which the Malaysian social formation was developed under British control. In essence the "Malay States" were one gigantic production unit for the extraction of these two commodities which were of vital importance to the expansion of British (and international) capitalism. The towns, industries, roads and railways of Malaysia were all ancillary to this central task of exploitation. However, labor was needed for this mammoth enterprise and in the case of Malaysia it was readily obtained from India and China.

The Indians who worked in the rubber plantations and to some extent the Chinese who worked in tin mining were isolated from other fractions of the Malaysian dominated classes by their location and attachment to particular production units. This early isolation did not prevent the eventual awakening of class consciousness amongst plantation workers faced with the appalling conditions of the depression and by the 1930s some of the militant industrial action was based on these estates. But Malaysian trade unionism was to have a brief life for its rise was interrupted by the Japanese occupation and later brought to a halt as the British first sought to re-establish control and then to destroy the Malayan

Communist Party after the war. Today plantation and mine workers are closely under government control as quiescent unions have been inherited from the colonial power, remodeled and virtually assimilated into the state apparatus.

The urban proletariat is a group which has grown substantially in size in the last 10 or 15 years as the processes of industrialization, urbanization and rural-urban migration have accelerated. Malaysian towns and cities were characteristically "Chinese" in the colonial period and right up to the 1960s but since that time there has been a substantial inflow of rural Malays especially to Kuala Lumpur, the capital city. Thus Malaysian urban centers are becoming increasingly multi-racial, a demographic change which some observers feel could have a strong implications for the political and class struggle (Stenson, 1976). Many of the Malay section of this urban proletariat throng to the cities in search of government employment. The state in its turn, despite having expanded significantly, is unable to satisfy all these job-seeking aspirants thus leading to the growth of a class of rural-migrants cum urban-unemployment who find themselves housed in squatter settlements around the major cities. Nevertheless, an increasing number of Malays working in

government organizations and in industry and commerce are coming face to face with a Malay bourgeoisie thus leading to the possibility that class consciousness will begin to erode and subsume ethnic consciousness (Cheng, 1979).

The non-Malay working class is differentiated in complex and significant ways, in particular because of the organization of Chinese businesses. These have traditionally been based narrowly on the family and more widely on the clan and dialect group. A worker in such a system is thus not selling his labor directly to a capitalist but is locked into an almost feudal family system. On the other hand, with the development of the distribution of commodities under colonialism vast numbers of Chinese and Indians were proletarianized as they were forced to sell their labor-power to the infrastructural institutions of the colonial state (ports, railways, etc.) or to private capital (the agency houses). This process of proletarianization has speeded up in recent years with the advent of multinational companies setting up plants in areas such as Petaling Jaya and Penang.

### 3.3 THE MALAY SOCIETY - BACKGROUND

The traditional Malay social system was structured on customs and practices that defined the whole range of

rights and obligations pertaining to interaction between two distinct groups: the aristocracy and the subjects. Rights in the traditional context were those that were recognized by custom, not privileges that were demanded (Tham, 1983: 1). Similarly, obligations constituted those acts and patterns of behavior that showed deference and homage to the ruler and his family. Customarily, the subjects looked to the ruler as the fount of power, the source from which one derived succor, the ultimate embodiment of legitimacy, and the apex of the entire social system based on adat (custom) (Tham, 1983). Thus, those rights which had become customary were considered to be official and their observance exemplified nobility. Social relationships were highly hierarchical, and the resolution of conflict had to be affected in accordance with these hierarchical expectation.

Among the aristocracy there were a royal component and a non-royal component. Together they formed an exclusive minority wielding power and influence. As a structured group the aristocracy was the most distinct and conspicuous, upheld by ceremonial trappings and symbols of power and status. This exclusivity was strengthened by ascriptive norms in status determination as well as unbridgeable marriage rules. Though the aristocracy looked

to the ruler as the source of legitimacy, their dominant motivation was the maximization of prestige and power. Consciousness of status and the desire for recognition and approval meant that wealth must be flaunted in the form of numbers of followers and retainers, in elaborateness of attire, and in the formality of court etiquette. The emphasis on status and exclusiveness among the aristocracy directed attention to the utilization of wealth for the enhancement of status rather than its rational accumulation. The emphasis on status also deterred direct involvement among the members of the aristocracy in economic activities that required contact with commoners.

The dominant organizing norm, as well as political ethic, that circumscribed the relationship between the rulers and the commoners was loyalty. Within the society, commoners were made to pay a feudal rent of 10% of the produce of the land. In addition, it was customary for every able-bodied man to provide one quarter of his labor for the performance of tasks required by the ruler or chiefs (Gullick, 1956: 108-9). Customarily, commoners had no proprietary rights to land. The ruler had absolute discretion in the utilization of land in the realm, and granted only usufructuary rights. Thus, the relationship between the ruler and his subjects was based on land and

the rights of usufructure. Loyalty as perceived was to the individual in the person of the ruler or the district chief. The system therefore did not encourage land conservation to bolster value; nor did it provide a sense of stability and continuity in one's relationship to the land. Inducement to accumulate wealth was further reduced, for conspicuous wealth merely attracted the attention of rulers and chiefs, who would forcefully take it away (Gullick, 1956). The low status of the Malay commoners, closely linked to their attitude of submission to the traditional aristocracy, shaped and conditioned a further set of beliefs that paralleled and reinforced the existing value propensities and social ideals and gave them a negative twist. The traditional custom was to regard the ruler or the chiefs as the embodiment of the fortunes of the state and its inhabitants. The fortunes of the ruler and his subjects were believed to be interlocked. While subjects could harbor thoughts of a better life, they could not conceive of an altered status as a mean to achieving it. The power of the rulers or the chiefs and the insecurity of property among the subjects ensured that such a conception remained undeveloped (Tham, 1983: 9). Moreover, not only was social separation accepted as appropriate, but also social disapproval was cast on those

commoners who had the presumption to act beyond their allotted status (Tham, 1983: 9). The proper and sensible reaction to powerlessness was to remain submissive and to give a wide berth to those who had power and prestige. Though these conditions dominated the lives of the commoners, they are nevertheless not the totality of the heritage of the Malays. In contrast, there are sayings, maxims and proverbs that encourage adaptiveness, initial sacrifice for future gain, industry, self-reliance, thrift, awareness of taking careful steps in any enterprise and appreciation of time. Though these were not dominant themes in the realm of traditional Malay values, yet they are not unknown.

Generally, the central theme in traditional Malay society was certainly not the achievement of socioeconomic mobility nor the rational accumulation of wealth and economic power. The rational and objective pursuit of economic advancement and socioeconomic mobility, in contrast, finds greater universalization and logico-meaningful integration among the Chinese and their culture. Traditionally, in Chinese culture it is believed that the foundation of a harmonious and stable family depends on the efficient management of human relationships as well as of the available economic means (Tham, 1983).

A Chinese proverb says, "if you have wealth, what you say is regarded as true. If you have no wealth, what you say is regarded as false." This proverb is not only cryptic in its import, but also emphasizes the fact that in reality wealth frequently holds the balance in human relationships. Such an attitude toward wealth can both motivate its pursuit as well as rationalize its accumulation. This theme is further interwoven into the larger fabric of beliefs and values whereby attaining wealth through industry and achievement in education is emphasized. Tham (1983: 15) offered two possible sociological equations arising from this. Industry and hard work lead to success, and the acquisition of wealth, and industry in education leads to social prestige and wealth. The crux of both equations is the belief that success in education or the acquisition of wealth demands consistent industry.

Traditional Chinese and Malay values clearly operated in different socioeconomic environments, and also varied in theme as well as emphasis. For instance, the person associated with intellect and knowledge in traditional Malay society was a man who was well versed in the holy books of Muslims, and possession of religious knowledge in this sense was related to the quality of piety; it was not



by any means an instrument for achieving socioeconomic status. In the case of the Chinese, the man of knowledge was one who knew the traditions, Chinese classics and philosophy, which was traditionally associated with wealth, power and prestige. There was indeed a significant structure group, the literati, from whose ranks were recruited the imperial administrators. Similarly, entrepreneurs, though traditionally held in low regard, were nevertheless often able to acquire enough socioeconomic status for their sons or grandsons to enter the literati (Tham, 1983). In contrast, the traditional Malay social system lacked this differentiation. There was an absence of structural diversity. The concept of structural diversity postulates a differentiated social system where structural groups, either social or economic, compete for prominence and prestige in society. It implies that there exists a variegated set of avenues for achieving mobility in the context of relatively unrestricted access to positions of influence, prestige and power. In traditional Malay society the relative lack of structural differentiation was also associated with the existence of social and economic mechanisms that ensured mutual exclusiveness among the structural groups. The British colonial policy of relegating power in the area of

Malay customs and religion to the Malay rulers ensured that the traditional social system would acquire a self-generated rigidity. Such a situation not only ensured the perpetuation of a social closeness, but its effect on mobility extended far beyond the period of contact with the colonial power in the 19th century.

The Malays were the earliest immigrants to the Malay Peninsula, the first wave probably arriving between 2,500 and 1,500 B.C., displacing the aboriginal population from the coast into the interior jungles. It was not until the late 14th century, with the founding of Malacca Sultanate, that a significant civilization with international contacts was established and the Malay Peninsula put on the international map. Malacca, enjoying a geographical advantageous position, developed into a flourishing trading port by the 15th century, with traders converging from the Middle East, India and China. The nature of trade determined the types of contacts established, the permanency of the population, the economic activities undertaken by the immigrants and the form of rule established (Van Leur, 1955; Wertheim, 1965; Lamb, 1964). In South-east Asia, pre-European trade was carried on in two types of areas - the well populated and cultivated rice regions of Java, Cambodia and Thailand, and the

sparsely populated coastal fishing and trading towns which included Malacca and certain parts of Sumatra.

In the second category, the traders came mainly in search of exotic spices and minerals such as gum, resins, saps, gold and tin; in exchange, a few luxury items were sold to the local population. There was little reason to either settle down in large numbers or to establish political control. Even where political influence was deemed necessary, it took more the form alliance with local rulers than direct conquest; for the "prize was not land but trade and the object of policy was the control of routes not areas" (Lamb, 1964: 110). Furthermore, trade was not an integral or indispensable part of the economies of China or India. These societies, still largely agricultural and self-sufficient, traded in luxurious commodities. This meant that the interruption or cessation of such commodities did not threaten the existence of their economies. Although there were substantial contacts between the Chinese and the Malacca rulers in the 14th and the 15th centuries, there is no evidence of a permanently settled Chinese population until the period of Portuguese rule (Purcell, 1967: Ch.2). The Chinese traders who came to Malacca were primarily sojourners who lived in their

own quarters adjacent to other traders and recognized the authority of the local rulers.

Trade conducted by the Asian merchants differed from the international trade conducted by the Europeans. The former was more complementary and barter-like, while the latter was more competitive and capitalistic (Go, 1975: 305). Such being the nature of contacts, there arose few problems of ethnic conflict. Pillay (1974) argues that one of the dominant ideas during the Malacca Sultanate period was the concept of racial and cultural tolerance. Evidence of ethnic harmony amongst Chinese and the local population in the pre-colonial period is available in Indonesia (Go, 1975) and in Thailand (Jiang, 1966).

On the whole, one may then conclude that the nature of contacts, and the social economic structures established in the pre-European trading period did not give rise to any serious competition between the local population and the traders. Neither did it lead to subjugation of the local population. In short, ethnic relations were relatively peaceful and there existed little barrier to assimilation if it was ever necessary.

The expansion of European mercantilism into the Malay Peninsula, first by the Portuguese, then the Dutch and the British, was to change the character of the Asian trade in

significant ways. For one thing, the Europeans established direct political rule over the trading port in order to ensure the monopoly of trade. There were two aspects to this trade, first the long distance or East-West trade and second the hinterland trade. The Malay Peninsula proved valuable to the Europeans in the long distance trade on two counts (Lamb, 1964: 107). First, it was a convenient place where they, particularly the British, could meet the Chinese traders to obtain the Chinese products without having to undergo the restrictions faced in the Chinese ports. Secondly, in the trade with China, it is well known that until the creation of a demand for opium in the 19th century, the British had nothing to offer to the Chinese and the balance of trade was clearly against their favor. The produce of the Malay Peninsula which was in demand in China proved to be a solution to their balance of trade problem (Hui and Canak, 1981: 209).

The Europeans were more interested in the East-West trade and took great pains to monopolize it. They were content to allow the Asians to conduct the hinterland trade. This made good economic sense because hinterland or local trade required extensive collections and distribution networks. Local products could be obtained more cheaply if it remained competitive. In other words,

the competitive sector in local trade, conducted by the Asian middle-men, was advantageous for monopoly profits in long distance trade. With long-distance trade lodged in the hands of the Europeans, there occurred an important change in the position of the Asian traders, from that of importers and exporters to that of intermediaries of middle-men. From then on, they became the most visible link in the chain of exploitation, connecting the local population to the European traders. By casting them into such a role, it is hardly surprising that the local population began to perceive the Chinese traders as the source of exploitation and the quality of relation between the Malays and the Chinese changed for the worse.

It is also important to note that the only significant relation that took place between the natives and the Asian traders occurred at the level of exchange. In this sense, Furnivall in his work on South East Asian plural societies, was correct in observing that the different races are casted into different economic occupations, live separate lives, and "meet only in the market, as competitors or as opponents, as buyers and sellers" (Furnivall, 1967: 52). In addition, Furnivall's concept of social and economic dualism describes fittingly how the Malay social system reflects influences of an

existing plural society. In expounding his theory of socioeconomic dualism, Furnivall described a dualistic socioeconomic system as "a society that contains two or more social orders existing side by side as a political unit but without any interaction" (p. 447-453). Furnivall further argued that a dualistic society lacks a common will, the absence of which is shown by the absence of any unified social demand. In a dualistic society, therefore, social demand is disorganized and social needs are sectional; there is no single social need for all sectional components. Finally, he posited that in such a system, the existing economic functions are distributed in accordance with ethnic differences, and certain specific occupations are also assigned on the basis of ethnicity, with Europeans constituting the apex of the economic hierarchy, the Chinese and the Indians at the middle level, and the Malays at the base. With Furnivall's major emphasis on the assignment of economic roles based on ethnic differences as the cause for the lack of participation in the colonial economy among the Malays, the Malays and their economy remained outside or at the periphery of the dominating colonial economy.

In 1881, when Singapore had attained the status of a major port and commercial center in Southeast Asia, Malay

participation in the economy was not inconsequential. Singapore was a free port, and there was relative security of person and property, and it provided an opportunity for economic advancement as well as opportunity for release from the constraints of native society (Tham, 1983: 30).

An analysis of the 1881 Census Report for Singapore (Tham, 1983: 31-35) showed that in the area of business and trade, the Chinese had a monopoly in the following occupations: poultry and pig slaughtering; pork dealers; liquor dealers; restaurant keepers. The dominance of Chinese in these occupations may be due to cultural and demographic factors. It was cultural because these occupations were related directly to the sale of goods and merchandise by the members of one cultural group, and in reality provided also by members of the same group. It is demographic because the population structure favored the Chinese - 87,000 Chinese, 33,000 Malays, 12,000 Indians (Tham, 1983: 26). However, in certain occupations, Malay participation was significantly high: dental care providers; steermen and pilots in shipping; teachers; administrators and public servants; and policemen. The relative preponderance of Malays in the administrative and police services shows that colonial intervention in the occupational patterns of the colony through support and



favor given to the Malays had already taken effect. In the occupational sector denoted as industrial, related to building and construction with the heavy use of brick, Chinese dominance was significant. Bricks were not traditional in Malay culture. The cultural items familiar to Malays in the area of building and construction were those that were easily and readily accessible in their environment, such as wood, bamboo and cane. This fundamental difference in material culture and its implications established very firm differentiations in the occupational patterns of the two cultural groups during the period of the growth of the colonial economy. The absence of Malay participation in this area of the economy may therefore be attributed to this group's lack of cultural continuity or knowledge in handling the demands and requirements relating to work in these emerging professions. When there was cultural continuity, Malay participation was indeed found. Cultural factors, therefore, were decisive in determining occupational patterns during the period of initial contact among the various ethnic groups.

One other important point that emerges is the fact that the traditional, largely agrarian economy of the Malays was peripheral to the main stream of economic life,

centered as it was on the rapidly developing urban centers. In these centers were investment and growth; dynamism; economic rationality directed at the pursuit of profit; innovation; and security of life and property. In contrast, the Malay rural communities pursued a relatively stable existence, materially and spiritually oblivious of the many new developments taking place in the urban centers.

Boeke (1953), in his study of the economy of the indigenous Indonesian society, differentiated between what he termed social needs and economic needs. Social needs, he explained, derive their origin from norms determined by the social collectivity in which they operate. Thus the means available to meet material needs such as goods and services cannot be given solely individual validation to meet the individual's search for satisfaction. Satisfaction must therefore be defined within the framework of the social norms that characterize the collectivity, and it is only when these norms are observed that the production of goods and services has validity. Heavy pressure on social needs is diametrically opposed to individualism and the rational pursuit of economic gain in accordance with individual effort to achieve individual gain. The concept of purely economic needs, on the other

hand, is conceived of as a negation of social concern for the needs of the collectivity. Its most notable characteristic is the emphasis on individual effort and responsibility to secure economic gain, based on individual weighing of the pros and cons of economic action. It is not a rejection of the norms of the collectivity in its entirety; rather, priority is placed on individual welfare and satisfaction, in contrast to that of the social collectivity. What Boeke attempted to convey was that members of the indigenous (Malay) society did not value individual profit, unlike members of a capitalist society, where individuality, accumulation of wealth and the rational pursuit of economic welfare are given a high premium. Some indigenous societies are seen as not possessing the requisite economic rationality to enable them to encourage vigorous entrepreneurship. Both Furnivall and Boeke therefore perceived the indigenous Malay economy as hopelessly incompatible with the aggressive capitalistic economy taking shape in the urban centers of Southeast Asia.

Seen as historical development, the emergence of social dualism in the wake of deepening economic dualism also gave rise to certain inhibiting factors that reduced the volume and nature of Malay participation in the

colonial economy. Colonial rule, in almost all parts of the world, found it advantageous to have local people to mediate its power both in the political and economic arena. The British nurtured the Malay aristocrats to become "comprador administrators", while in the economic sphere the immigrants, particularly the Chinese, were allowed to play the role of "comprador businessmen" (Hui and Canak, 1981: 210). The reason is that it is safer to keep political and economic power separated, in the hands of different communities. This pattern is not unique to Malaysia but can be found in most colonial states in Africa where Indians assume the middlemen position and in parts of Southeast Asia where the Chinese take on that role.

The emergence of social dualism meant also the emergence of dualism in the evaluation of occupational prestige in the two communities. This, of course, reflected the growth of an occupational hierarchy peculiar to the Chinese, in contrast to the Malays, who continued to be influenced by the traditional status system. Among the Malays, therefore, the institutionalized means of attaining mobility and status as well as the values given emphasis in the evaluation of work and occupation continued to be circumscribed within the traditional

structure. Thus, certain occupations considered to be desirable and honorable by one community did not receive the same degree of regard in the other, and vice versa, and produced significant differences in the floor and ceiling of each hierarchy of occupations. The ceiling of the status hierarchy in Malay society was formed by the aristocrats, the floor by the Malay peasants. In the case of the Chinese, the ceiling had no real social definition. Status at this level was measured by wealth and material plenty; at the floor were the indentured laborers. In terms of occupational type as a determinant of social and economic status, the Malays sought work in the administrative structure, and those who occupied superior positions in the structure constituted the economic elites and thus formed the ceiling of the occupational hierarchy. In reality, these individuals were also members of the aristocracy.

The growth of Malay economic activity within the modern economy occurred because some of the Malay traditional goods and services could be sold. However, the modern economy grew rapidly, widening the gap between the native economy and its relevance in meeting the goods and services demanded by the modern urban economy; consequently, contact between the native economy and the

modern economy had, by the 1920s, disappeared (Tham, 1983: 59). Although some Malays migrated to the urban centers, they continued to retain much of the cultural values and institutions of their society. Furthermore, the colonial policy which cumulatively became more openly pro-native, at least in terms of political status vis-a-vis the non-Malays, tended to interpret Malay rights and privileges in the areas of land-ownership and participation in government administration. There was, of course, no official discouragement of Malays to engage in entrepreneurial activities but no encouragement either.

There was a total contrast regarding the status system and conceptions of what constituted the ideal of society and social organization between the Malays and the Chinese. For the Malays, the stress was on maintaining the traditional legitimacy of ascription and stability in institutional life. Life was kin-centered and circumscribed, with cooperative economic production based on land. According to Tham (1983: 61) for the Chinese, "there was initially no established status system to regulate the pursuit of power and prestige or to channel energy into specific cultural molds". What unified the cognitive reality of the members was the economic motive of achievement and success. Hence, competition, effort,

energy, innovation and commitment formed distinct elements in determining social position in the emerging status system.

The occupational patterns of the Malays, as stated in the Census Reports for the Federation of Malaya, 1957 (Malaya, 1957), showed a persistent unchanging similarity with those that had preceded them more than half a century earlier. While non-Malays had become involved in a wider range of economic activities in both depth and breadth, the Malays as a whole continued to be engaged predominantly in traditional economic activities and small-scale business and industrial production. There were more Malays in high level administrators than business managers. Of the Malays registered as administrators and managers, more than 60% were engaged in administration, which in contrast to the Chinese who constituted more than 70% of those registered as directors, managers, and owners of business enterprises. Of those engaged in sales and related occupations, Malay constituted roughly 18%, and the Chinese, 70%. In the sale and marketing of motor-cars and engines, and insurance, the Malay made up of 3% and 5% respectively.

What is perhaps significant during a period of economic and social development is the crystallization of

contrasting elite groups that exert influence in their respective societies. In the case of the Malays, their linkage with the colonial hierarchy was through the bureaucracy, albeit at the middle and lower levels. The individuals in these positions constituted subordinate administrative and executive officers, but exercised influence, both culturally and motivationally, on their own society almost exclusively. In fact, they accepted the feudal values with which they had grown up, and were of an aristocratic feudal background that provided the "native backbone" of the centralized bureaucracy. They therefore allied themselves with their feudal superiors, who were in turn allied with the dominating colonial political structure. Within the native society the substantial overlapping between the traditional aristocracy and the Malay bureaucratic elites meant that the traditional status system remained intact. In the case of the Chinese, the evolution of the elites had centered on the accumulation of economic power in the urban areas. A more fundamental result arising from the differences in elites was the fact that legitimacy and the stability of elite status, in the case of the Malay social system, relied on the maintenance of the agrarian structure of the Malay economy. There was also an implied social constriction on



mobility to other areas of economic life, especially in business and commerce, because these did not have cultural recognition nor the potentiality to develop viable value system to support aggressive and individualistic entrepreneurship.

Until the 1960s, the patterns of economic activities among the Malays reflected the underlying economic, social and political processes that had grown since the advent of colonial rule. It could be said that economic, social and political processes emerging in the early part of this century are reflected in the occupational pattern in the Malay and non-Malay communities. The defining characteristic of a traditional economy is that it has an agrarian base social system. This agrarian base is exemplified in the predominance of Malays in the agricultural sector of the Malaysian economy. Malaysian Five Year Plans (Malaysia, 1965; 1971) show that in small scale agricultural workers and activities relating to fishing, Malays constituted 80% and 60% respectively. A further striking feature of the occupational patterns of the Malays up to the 1970s is their predominance in activities relating to law enforcement (police) and defense (armed forces). Though the colonial administration gave special favor to Malays in recruitment

to the police and armed forces, engagement in the maintenance of law and security has its historical prototype in the traditional Malay system in the form of fighting men in the employment of rulers and chiefs. The ethos of bravery, loyalty, and initiative that attributed the action and behavior of men in the armed forces was a pervading theme in Malay classics and folk romances. The establishment of the Malay Regiment in 1933, all ranks within which were to be the sole rights of the Malays, and the special recruitment of Malays in the police force, provided an occupational avenue for Malays. The earlier involvement of the Malays in the police force and the armed forces, was also engendered by the presence of Malay school leavers whose elementary education in the Malay language fitted them for a narrow range of jobs of which service in the police force and armed forces represented a major portion. In 1957, 88% of the police force and 32% of the total armed forces were Malays (Malaya, 1957 Census Report). Politically, the Chinese were discouraged from enlisting in the armed forces, and in reality there was no necessity to encourage Chinese involvement. Service in the armed forces, culturally and in term of occupational evaluation had a low status (Tham, 1983: 69).

Another factor that gained momentum in shaping occupational patterns of Malays was the heightened urban-rural contrast underlying the economic life of the community. While on one hand, the non-Malay involvement in the urban economy had grown in complexity, Malay involvement, while not negligible, was still growing at a very slow pace. Apparently Malays with educational achievement tend to associate themselves with salaried occupations in the government sector, or in the private sector, with foreign enterprises and firms. Of those Malays who were outside this group, the majority were engaged in low level occupations requiring little skill. In the 1957 census, Malay participation in the upper level of clerical services was 20% and the Chinese 64%. In the population of typists, stenographers and private secretaries, Malays represented 10% and Chinese, 58% (Malaya, 1957, Table 14). In small scale production and manufacture, Malay participation was confined largely to certain traditional categories such as carpenters (24%), tailors (17%) weavers and spinners (91%). In professional occupations, compared to Chinese, Malays were well represented in architecture (19%), surveying (17%), engineering (19%), animal husbandry (17%), biological sciences (17%), nursing and mid-wifery (38%), hospital

assistantship (34%), dressing (31%); as well as teaching (49%) (Malaya, 1957, Table 14). Malays were relatively under-represented in occupations relating to chemistry and physics (Malays 5%, Chinese 30%); medicine, dentistry and surgery (Malays 4%, Chinese 65%); medical technology (Malays 20%, Chinese 65%) and legal administration and advocacy (Malays 18%, Chinese 32%). There are several important occupational features. The predominance of Malays in the teaching profession and in mid-wifery and nursing, for example, was a reflection of the urban-rural dichotomy, linguistic differentiation and ethnic demand. In certain occupations, possession of linguistic and cultural skills was important because the clientele was defined in terms of ethnic and linguistic similarity. In other occupations such as religious work and provision of medicines and services, the cultural factor was the crucial determinant.

#### 3.4 THE POLITICAL AND BUREAUCRATIC ELITES

The evolution of Malaysian society has thrown into prominence the role of the political and bureaucratic elites in the development of Malay society. The political system pertaining to Malay society continues to reflect in

significant proportions the traditional feudal social structure, and in turn reinforces the role and function of the dominant elites in the society, not only as initiators of socio-economic change but also as shapers of opinion and political consciousness (Tham, 1983: 168). Contemporary Malay political behavior and the status system are both reflections of the economic and political structure. The rural foundations on which Malay society rests have experienced limited changes because the traditional attitudes of the rural peasantry toward those who wield power, authority and influence in politics have not radically altered. The concept of social order continues to be perceived directly as the maintenance of the traditional government, with the various cultural, social, psychological and religious ramifications historically associated with it (Tham, 1983: 168). Thus, it is one of the sociological indicators of Malay society that only those who traditionally possess prestige and influence are also highly motivated to secure economic and political power.

In Malaysia, the Malay polity remains traditional in structure because the political elites continue to represent largely rural interests, and the adequate representation of rural interests is fundamental to the

politics of survival of Malay political elites in particular. In Peninsular Malaysia out of 104 constituencies, there are 64 constituencies in rural areas with Malay majorities (Pillay, 1974: 44). Indirectly, this would mean that so long as rural interests and needs adequately met, and the need to seek employment in the urban areas is minimized, the elite positions will be stable. Thus, the rural character of Malay society directly affects political action and behavior among the Malays, and the maintenance of the status of the Malay political elites will require the maintenance of a secure economic base in the rural areas from which they derive their power and support.

Essentially, the Malay elite is still an elite of birth, as indicated in the early leadership of UMNO and the Malay Administrative System (Pillay, 1974; Ratnam, 1975), though recruitment into the ranks of the political and bureaucratic elites has undergone gradual change with emphasis on non-aristocratic as well as aristocratic talent, while many of the individuals constituting the Malay political and bureaucratic elites are today commoners, their achievement of elite status does not represent the creation of a separate status group, nor does it represent the creation of new ideological values

and preferences (Pillay, 1974; Tham, 1983). Ascent to elite status continues to occur within the traditional status system which has yet to undergo significant differentiation. There exists, in fact, a continuous cross-over between the political and bureaucratic elites, as in the case of UMNO, implying a mutual identity of interests and ideological orientation.

Education was the key factor that enabled capable Malays to realize elite achievement and facilitated their recruitment into the ranks of the political and bureaucratic elites. Ideologically, both the political and bureaucratic elites share the common belief that the most important task facing Malay society is the improvement in the socioeconomic achievement. It must be mentioned that this represents their dominant concern, though certainly not the only one, for non-Malay political and economic interests are duly considered as well (Snodgrass, 1980; Ratnam, 1965). The later aspect is inevitable, since politics in a plural society must show an adequate degree of versatility to bring about an acceptable compromise among divergent interests and demands.

Since the power base of the political and bureaucratic elites is rural, the rationale for initiating development in the rural areas is important. It is to

ensure that political support for the political elite in particular remains unabated and their status, prestige and power in the Malay status system maintained. Rural development had to mean the alleviation of three sets of inter-related problems - - problems relating to the development of social and economic institutions conducive to development; problems of capital formation and the provision of technical assistance; and problems of demography, such as overcrowding and sub-division of land into uneconomical lots (Malaysia, 1965; 1970; 1973; 1976). One of the demographic characteristics of the Malay community in 1960 was that 76% of the its population was below 35 years of age (Malaya, 1957 census). The need to secure adequate employment for these people was clearly urgent. The Federal Land Development Authority (FLDA) scheme was established in 1960 to provide land for the landless, as well as to solve the problem of overcrowding, particularly in traditional rice growing areas. The land development scheme has been granting to individual applicants a fixed acreage of land for growing cash crops such as rubber and oil-palm, to sustain a better income. To address the shortage of capital, government-sponsored banks, the Agricultural Bank and the Development Bank, were established to provide loan and credit facilities in



rural areas. To complement this function, rural cooperatives were formed, to act as institutional supports for capital formation, marketing and consumption.

Since the launching of the New Economic Policy, the political and bureaucratic elites have been setting the pace and direction of modernization by making calls on the Malay masses to enter the private sector, principally in business and commerce, and to equip themselves with better education. Political and legislative instruments to remove what are considered to be hindrances to effective participation have been employed (Tham, 1983: 174). Employers and commercial enterprises have been asked to recruit at least 30% Malays in their employment. Economic growth, at 7.3% in the 1970s and the earlier part of 1980s, coupled with the rapid expansion of education, has provided wider occupational avenues for the Malays.

### 3.5 EDUCATION AND EMPLOYMENT

An educational system seen from the point of view of value transmission, functions in two different ways. It maintains the social system by fostering and consolidating the society's basic values, institutions and skills. This

educational function is popularly termed as the conservative function. The second operation tends to bring about discontinuities in the society's structure by inculcating new values and concerns that may lead to the emergence of new structural groups. However, in reality, both functions operate, and hence cannot be separated in absolute terms. It is really a question of how much one is promoted at the expense of the other and vice versa.

Formal education in the Malay language during colonial rule gave greater emphasis to the conservative function. In fact, this concern with the maintenance of the traditional Malay social system through education received its original formulation and impetus from Stamford Raffles, the Governor of the Straits Settlements, when he pronounced that education in the English language was only to be for the sons of Malay rulers and non-Malays, who had found favor with the colonial government (Tham, 1983; Loh, 1975). Raffles was principally concerned with two issues related to education. First, his educational philosophy was elitist. He was more interested in exposing the traditional elites - - the aristocratic class - - to western education, hoping that through them modernization would eventually occur in the native society through a process of downward seepage issuing from the

apex of the status system to the subjects. The second concern was that those who received western education ought to acquire the skills, values and knowledge that would prepare them for middle and lower level positions in the colonial administrative system. These two goals remained implicit within the entire English school system up to the first half of the 20th century, though recruitment into these schools became progressively less restrictive. Essentially, the colonial administration saw a parallel between social differentiation and educational differentiation in respect to education for the Malays. In social differentiation, what was preserved was the status contrast between the aristocratic elites and the subjects. In educational differentiation, the social contrast between the aristocracy and the subjects was to be kept intact through the support of two forms of education in two different languages, namely English and Malay. Thus, for the Malay masses, Malay education was provided in the Malay language, and its curriculum was given a rural bias. This approach was accepted as correct because it was consonant with the notion that education meant the preservation of Malay cultural values and economic institutions (Loh, 1975). The study of history, literature and language in the Malay schools took its orientation

from traditional texts, which at the same time encouraged the internalization of traditional values, ideals and ethical concerns. Malay oral and written tradition had stressed the ethos of undivided loyalty to the ruling aristocracy, and condemned treason. Thus, there was an emphatic concern for the conservation of culture and institutions in the traditional social system. In the end, values that stressed achievement, economic mobility and the rational accumulation of wealth were undeveloped, while values such as ascription, particularism and submissiveness were reinforced. There was thus, following the introduction of secular education among the Malays, a slow response to education shown by a lack of concern for education, and a high dropout rate (Loh, 1975). These continued to remain as problems even after the achievement of independence in 1957.

The growth of educational institutions for the traditional aristocracy, such as the Malay College at Kuala Kangsar (1905), the English College at Johor Bahru (1920), and the Malay Girls' College at Melaka (1942), ensured that the status separation between the aristocracy and the subjects remained effective. Of course, there were other English-medium institutions of equal importance, such as Victoria Institution in Kuala Lumpur; King Edward

VII in Taiping; King George V in Seremban; Clifford in Kuala Lipis and Kuala Kangsar. Although opportunities were later offered to capable Malay youths to enroll in these elitist institutions, the ameliorative influences to be achieved from this were constrained by the process of colonial sponsorship, whereby graduates from these institutions were absorbed into the colonial administrative services, principally in the Malay Administrative Service (MAS) and the Malayan Civil Service (MCS). Education in the English language for the Malays thus had political ends, and the fact that those who attained it remained associated with the exercise of administrative and political function led to the maintenance of the status of the traditional elites. For Malays who acquired English secular education, their identification with the traditional elites, both occupational and interest-wise, brought them prestige and status. Further, British preference for Malays in the bureaucracy ensured that the motivation to seek mobility elsewhere was effectively blunted (Tham, 1983: 98).

In terms of development, it became clear that Malay-medium education gave limited opportunities for economic mobility. Most of the Malays who showed scholastic excellence in the realm of Malay education were recruited

into the rank of the teaching service, journalism and the lower level of administrative services. Actually, the growth of Malay education was paralleled by the growth of a new status group in the Malay society - - those engaged in the teaching profession. Their influence was to increase the motivation among promising young Malays to enter the teaching profession upon completion of studies in Malay schools. However, this merely meant that the teaching profession constituted the highest point that Malay school students could expect to achieve in their search for mobility. The emergence of teachers as a status group did not pose a challenge to the status of the bureaucratic elites trained in English-medium schools. Each status group, in effect, operated in a different socioeconomic realm, separated by differences of educational background, though the bureaucratic elites enjoyed higher prestige. Thus, the majority who failed to enter teaching profession, journalism and civil service, continued to be associated with traditional economic activities in the rural areas, while some were employed in skilled and unskilled jobs in urban centers. Therefore, the occupational disadvantages associated with Malay education became cumulative and severe. This phenomenon was heightened by the expansion of English medium schools,

which represented channels for both higher education and mobility.

Perhaps the most notable educational experiment in 1950 was the concept of a "special Malay class." Under this arrangement, intellectually promising students from Malay schools, on completion of their fourth elementary year, were selected and given the opportunity to continue their education in English schools. The idea was that such a change would allow Malay school pupils to pursue their education to a higher level, secondary or tertiary as the case may be, so that eventually they could attain a measure of economic and social mobility. It was a release valve for the restrictions on mobility associated with Malay school education. The Special Malay Class arrangement, however, had little impact on the occupational mobility of the Malays because only a small number gained enrollment in the English schools due to limited places, and a still smaller number who were able to hold their places after enrollment because of problems of language competence and adjustment (Loh, 1975; Tham, 1983).

The recommendations in the Report of the Education Committee of 1956, and later the Education Review Committee of 1960, to establish modernized Malay secondary

schools and to make the Malay language the national language of the country, provided greater avenues for Malays in the Malay schools to seek higher education, and to experience social mobility (Mustapa, 1987). At least they could now see that they were on a par with the English medium schools, which they had previously regarded as representing everything they had been denied (Tham, 1983: 116). Malay secondary schools came into being in 1963. Previous to this, only a limited number of secondary classes were in existence in Malay elementary schools and English medium schools. By 1967, there were 298 Malay medium secondary schools. The premier school was the Sekolah Alam Shah (Alam Shah School) in Kuala Lumpur, which admitted the cream of Malay medium pupils from the whole of Malaysia, and gave them an academic orientation for eventual entry into the University of Malaya (Malaysia, 1971).

From 1965 onwards, even the provision of opportunities for secondary and partially tertiary education in the Malay language could not assuage the fundamental problem of economic mobility that Malay secondary school leavers had to confront eventually if the dualistic educational (Malay and English) and economic system was maintained. It was obvious to those connected



with education in the Malay medium that the urban institutional framework toward which school-leavers looked for employment and economic mobility did not favor Malay school leavers (Tham, 1983: 117). The existence of Malay and English secondary schools meant that Malays could enroll their children in either Malay or English medium schools. However, the maintenance of this dualistic educational framework, namely, the parallel growth and development of Malay and English medium schools, would have led to a division of the Malay ethnic community, separating Malay bureaucratic and aristocratic groups from the Malay masses, as indicated by the large number of Malay elite students who sought enrollment in English medium schools. On the other hand, it was probable that the majority of Malay parents from lower social classes, especially those in the rural areas, would enroll their children in Malay medium schools.

The school system that had emerged from the time of the establishment of the Malay schools in the 1920s to the National School System in the 1970s had been redefined progressively to help principally Malay pupils achieve socioeconomic mobility. As early as the 1950s, various educational efforts had been made to provide technical training for the rural populace. Rural Continuation

Schools, Vocational Schools and Training Centers were established. The latter category was the effort of the Rural and Industrial Development Authority (RIDA) to provide assistance in agriculture projects, rural industries, transport and marketing, communication and training. In 1965 RIDA was replaced by the Council of People's Trust (MARA) as a direct consequence of the perceived need to modernize the rural areas. RIDA was regarded as weak and lacking in clear-cut aims (MARA, 1969). In the area of education and training, MARA established the Mara Institute of Technology (MIT), which offered two types of courses, professional and academic courses, the latter being essentially pre-university studies, on completion of which students could enroll in the university for undergraduate training. The rationale for the establishment of MIT was to bring about rural innovation through education. Its programs of professional training in accountancy, commerce, business administration, architecture and engineering would undoubtedly have a direct impact on the rural populace, since promising young Malays could apply to read these courses and, on completion, to look to the urban economy for employment. In this case, MIT is directly able to influence the mobility pattern among rural Malays, and

thus adds to the enlargement of the middle class of professional Malays, an achievement in which the Malay schools in the past had been less successful. This form of "sponsored mobility" (Turner, 1961: 72) would allow for at least a section of the rural community to break free from the constrictions of rural life.

The University of Malaya, established in 1959, played a key role in producing graduates needed to fill the places left vacant by the expatriate officers early in the 1960s. More colleges and universities were built in the 1960s and 1970s, all contributing to the pool of administrators, technicians, teachers and other professionals required in various fields. However, many Malays opted to pursue higher education in the humanities and social sciences, because of the institutional incentives available to graduates with such educational training in the civil service. Besides the fact that opportunities for employment in the civil service are available, other interacting factors tend to encourage the obtaining of degrees in the humanities and social sciences to secure employment in the civil service. Among these factors are the existence of a quota system which favors Malays over non-Malays in a proportion of 4:1 in the civil services; the social prestige Malays assign to

those associated with the civil service; attractive salaries in the civil service relative to the other professions; the rapidity of mobility within the civil service; involvement in political decision-making with the political elites, enhancing one's prestige, social status and economic security. Another equally attractive factor is the fact that the civil service is regarded as the avenue to political power. Within the civil service itself, there is no significant disparity in salary and influence between humanities and social science graduates on the one hand and doctors and engineers on the other (Tham, 1983: 147). One of the most sought-after occupational niches among Malay graduates is that of the post of district officer or assistant district officer. Such an individual not only enjoys vast power and influence in the district to which he is assigned, but also there are few other occupations that can vie with it in terms of status and importance to Malay life.

It is inevitable, as a sociological process, that any system of incentives initiated to motivate Malays to pursue new occupational patterns will have adverse consequences for the desire of Malays in the future to look to the civil service for employment. This becomes problematic because those Malays who constitute the

reference groups in Malay society are individuals who are active in the government, namely, the political and organizing elites. This is to a large extent unavoidable, since successful Malays are mostly engaged in activities associated with government and administration, and this situation merely underlines further the perceived desirability for Malays to be associated with these activities.

It has been admitted that poverty is a major problem facing this country. Based on government data on households in Peninsular Malaysia, in 1970 the percentage of poor was 49.3% (Malaysia, 1971: 163) and in 1975 it was 43.9% (Malaysia, 1976: 180). Based on 1975 figures, it was found that 87.4% of the poor households were in the rural areas, of which 69% were involved in agriculture and fishing. The percentage was higher among rice cultivators (77%), followed by fishermen (63%) and small rubber holders (59%). The picture today has not changed much (Syed Husin, 1981: 82). It is clear that poverty is more common in the villages; this means Malay poverty, since 67% of the village people are Malays (Malaysia, 1976: 180).

There is no comprehensive study which gives details on the distribution of individual or household incomes

according to ethnic background or economic sector. However, the seriousness of the problem can be judged from the following figures. In 1957, the 20% of households who earned the highest incomes accounted for nearly 50% of the total income in the country, while the 60% who earned lower incomes accounted for only 30% of all income. The situation deteriorated in 1970, when the incomes controlled by the top 20% had risen to 56%, while the income of the the lower 60% had fallen to 25% (Malaysia, 1971; Malaysia, 1976). From the above facts, we can conclude that the majority of the group whose income declined were Malays. The clear incontrovertible fact is that the poor become poorer. Thus, the gap between the upper and lower classes, between the rich and the poor, becomes even wider.

According to the Fifth Malaysia Plan (1986-1990), all ethnic groups experienced increases in income during the period 1979-1984 (p. 99). In 1979, the Malays mean household income was 52% of the Chinese mean income, but by 1984, it increased to 57%. In term of category of occupation, the percentage of Malays in the professional and technical group rose from 53.7% in 1980 to 54.4% in 1985. This percentage, however, included a large number of nurses and teachers, without which the proportion of

Malays in this category in 1985 was about 45%. However, taking only the professional degree holders in this category, the share of Malays was about 32%. "The distribution of occupation in the other categories indicated that although the share of Malays had increased over the years, a substantial number of them were employed in lower paid jobs" (p. 101).

According to traditional practice, even during the colonial era, the salient feature of the salary structure in the public service is the use of educational attainment as the basis for classifying salary groups. As indicated in Table 3.1, there are four major salary groups, A to D, with corresponding educational qualifications. The rationale underlying the classification of salary groups is the principle of rate for the job according to the Cabinet Committee (Malaysia, 1977) based on two main factors:

- a) Duties and responsibilities of the post and the qualifications necessary for the particular post;
- b) The educational credentials required for the position.

With reference to the basic salary structure introduced by the Cabinet Committee Report, 1977, and presently enforced, the following characteristics need to

be noted. First, this basic structure provides the plan for determining the complete structure of wage and salary scales for the entire public sector. Variations in pay-rates are generated from these reference pay-rates in the basic structure. Second, the diverse groups of employees are classified according to grades and qualifications. The number of steps along a given grade and its associated incremental rates are given. For instance, Salary Group A contains Grades A1 - A30, encompassing all university degree schemes of services, including their attendant promotion grades. The serial numbers attached to each Salary Group refer to the highest and the lowest grades in a particular Group. Code A1, for example, is the scale for the Chief Secretary to the Government, which is also the highest scale for the entire structure. Code A30 is the salary scale for an untrained teacher with degrees not up to the level of the Pass Degree of the University of Malaya. Salary Grades Code A1-12 have relatively few incremental steps compared to all other Grades, which have as many as the limit of 22 steps. For each Grade corresponding to each level of qualification, skill, and training, initial salaries are also given. Third, the basic salary structure also indicates the progression from one salary grade to another on the basis of obtaining



qualifications, training and skills, and progression through promotion within a particular scheme of service. Academic credentials appear to be important not only for determining starting salary scales but also in decisions regarding promotions. Fourth, the initial wage of the General Laborer (the lowest category in the wage and salary structure) is the basis for the entire structure. In 1977, this "consolidated" wage amounted to M\$195.

In sum, the most significant feature of the basic salary structure in the Public Sector is the fact that education is of crucial importance in determining the starting pay for each salary grade and promotion from one grade to another. Thus, educational credentials also determine who gets a starting salary of M\$265 and who gets paid at M\$405 or M\$5150.

The most tangible benefit of the New Economic Policy, launched in 1971, was the growing of a larger Malay middle class and the shift of the Malay population from predominantly agricultural occupations to more diverse occupational activities (see Tables 3.2 and 3.3). The middle class groups grew from 219,500 (14.9%) in 1970 to 276,800 (19.8%) in 1980, and 746,200 (24.0%) in 1985, an increase of 526,700 (9.1%) with a decade and half, while in the high class groups, the increase was 251,700 (5.6%)

with the same period. The expansion of the state enterprise sector under the State Economic Development Agencies, the vigorous promotion of Malay business, and the battery of regulations imposed on private firms to employ Malays in rough proportion to their population now opened up a greater number of positions in the urban sector than before. Between 1970 and 1985, most of the Malay gains were in the lower occupational categories of employment in the urban sector, such as production workers and transport operators, from 18% (266,000) in 1970 to 28.9% (640,600) in 1980 and 23.9% (741,500) in 1985 (Table 3.3). The size of the Malay elite stratum increased both absolutely and relatively. The Malay share of the professional and technical stratum increased from 4.3% (64,200) in 1970 to 5.3% (118,200) in 1980 and 9.8% (305,200) in 1985, while its share of the administrative and managerial stratum increased from 0.5% (7,400) to 0.7% (16,200) and 7.2% (216,300) between 1970 and 1985. However, there was a very significant portion of Malays in the agriculture sector; it experienced a decrease of 17.1% between 1970 and 1985 but in absolute numbers, it increased by more than 482,000.

Table 3.1

## PUBLIC SECTION: SALARY STRUCTURE, 1977

DIRECT ENTRY LEVEL	GRADES	1	2	3	4	
<b>SALARY GROUP</b>	<b>QUALIFICATIONS</b>					
A	DEGREE	A1	5350	5350	1	-
		A2-A11	4950- 1805	5150- 2205	2-4	200- 120
		A12	1805	2005	3	-
		A13-A30	745	805	22	60
B	DIPLOMA/HSC	B1-B16	485	1325	22	40
C	SCH CERT	C1-C20	405 295	1035 820	22 22	30 25
D	LCE, SUBORDINATE AND MANUAL GROUP	D1-D47	265 220 195 195	425 340 275 255	22 - - 9	20 15 10 7.50

Source: Report of the Cabinet Committee, 1977, Malaysia, Kuala Lumpur. Appendix I, p.238; Appendix II, p. 239-243.

Note: 1 = Starting Salary  
2 = Highest Salary  
3 = Number of Incremental Steps  
4 = Incremental Rates

HSC = Higher School Certificate  
SCH CERT = School Certificate which is equivalent to the Malaysian Certificate of Education.  
LCE = Lower Certificate of Education.

Table 3.2

MALAYSIA: PERCENTAGE OF EMPLOYMENT BY OCCUPATION  
AND ETHNIC GROUPS - 1980 AND 1985

OCCUPATIONAL GROUP	MALAY		CHINESE		INDIANS		OTHERS	
	'80	'85	'80	'85	'80	'85	'80	'85
PROFESSIONAL & TECHNICAL	53.7	54.4	33.8	32.4	10.3	11.1	2.1	2.6
TEACHERS & NURSES	60.8	64.1	30.9	28.7	7.7	6.3	0.6	0.5
ADMINISTRATIVE & MANAGEMENT	28.6	28.2	63.3	66.0	4.9	5.0	2.7	0.8
CLERICAL	52.3	54.0	37.9	36.8	8.9	8.7	0.9	0.5
SALES	31.1	37.9	62.0	56.8	6.7	5.2	0.2	0.1
SERVICE	55.4	57.9	33.4	31.2	10.0	9.7	1.2	1.2
PRODUCTION	45.5	45.5	43.9	43.1	10.1	10.9	0.5	0.5
AGRICULTURE	73.5	73.5	16.9	17.2	8.8	8.3	0.8	0.5
TOTAL	56.6	56.7	33.5	33.4	9.1	9.1	0.8	0.8

Source: Malaysia, 1986, Fifth Malaysia Plan, 1986-1990,  
Table 3-6.

Table 3.3

MALAY OCCUPATIONAL DISTRIBUTION, 1970, 1980 and 1985  
(PERCENTAGE AND THOUSANDS)

CLASSIFICATION	OCCUPATION	YEAR		
		1970	1980	1985
HIGH	a. PROFESSIONAL & TECHNICAL	4.3% 64.2	5.3% 118.2	9.8% 305.2
	b. ADMINISTRATIVE & MANAGERIAL	0.5% 7.4	0.7% 16.2	0.6% 17.5
MIDDLE	a. CLERICAL	3.4% 50.4	7.7% 169.4	7.2% 224.7
	b. SALES	4.7% 69.1	4.5% 99.8	7.0% 216.3
	c. SERVICES	6.8% 100.0	7.6% 168.0	9.8% 305.2
LOW	PRODUCTION AND TRANSPORT	18.0% 266.0	28.9% 640.6	23.9% 741.5
VERY LOW	AGRICULTURE	62.3% 920.5	45.1% 998.6	45.2% 1402.6

Source: Malaysia, Fourth Malaysia Plan, 1981, Table 3-11, and Malaysia, Fifth Malaysia Plan, 1986, Table 3-6.

### 3.6 SOCIAL STRATIFICATION - THE MALAY COMMUNITY

Within the framework of the system of social stratification, three classes can be found: the upper, middle and lower classes. In traditional society the upper class consisted only of royalty and the chiefs, but at present there are other categories, too, such as senior government politicians, administrators and entrepreneurs. The sultans still exist as symbols of sovereignty in the Malay states, while the governors head the former Straits Settlements of Penang and Melaka. The sultans and their families continue to enjoy a privileged position, but the influence of the chiefs can be said to have declined to insignificance. Politicians have emerged as a significant phenomenon after independence, the most senior among them serving at the national level as cabinet ministers and as executive councilors. Some of them have family ties with members of the traditional upper class. At present, most of the leading politicians have plebeian backgrounds and have attained their positions more through achievement than through ascription.

Administrators had already emerged and played a significant role during the time of British rule. In the beginning, status or recruitment into the civil service was through ascription, but after independence, higher

education became the most important factor determining the level of achievement. Following Malayanization in 1960s, many senior positions in the civil service, judiciary, military and police have been occupied by Malays. Secretaries of ministries and their deputies, state secretaries, generals, and senior police officers all make up the upper crust of the bureaucracy. As for the entrepreneurs, some of them are owners or directors of various companies. Since the last decade their number has increased, many of them coming from the ranks of active government politicians or those who have retired from politics and administration.

Another component of the Malay upper class is the creation of the Malay bourgeoisie, sometimes referred to as the 100 Malay millionaires (Hui, 1985). Officially, there exist no specific policies to assist the formation of this group, but in practice many of the Malay politicians, bureaucrats and aristocrats have used their influence to enrich themselves. Until the mid 1970s, prominent Malay bourgeoisie were primarily directors of large corporations, most of them did not own the companies on which they sat. By the late 70s, when the government set a specific goal at the achievement of 30% of Malay ownership and employment in all sectors of the corporate

economy, the number of Malay millionaires began to escalate significantly. Between 1970-1980, Malay ownership of equity in the corporate sector grew from 4% to 12.4%, at an annual rate of 31.4% (Malaysia, 1981: 62).

The middle class, which did not exist in traditional society, has now emerged as a result of economic, politico-administrative and educational developments which occurred during British rule and after independence. The middle class fills fewer political and social positions than the upper class. Many Malays belonging to this class are civil servants. This is because the Malays were always given preference in recruitment to the civil service, and after independence the Constitution fixed a quota of three Malays to one non-Malay in the service. Although most officials in administration are Malays, in the professional fields their numbers are few, for example, only 13% of executives, 13.5% of engineers, 17.9% of accountants, 11.6% of scientists and 7.6% of doctors are Malays (Third Malaysia Plan, 1976: 153, Table 8-11). Many of these professionals work in the private sector, and they constitute an important category of the middle class.

Prior to 1970, the major part of the state's efforts have been directed at the expansion of a petite bourgeoisie class, especially a Malay petite bourgeoisie.



Licenses were issued to them, but the pressing problem the Malays face was credit. In 1968, only 4% of the total commercial bank loans were for Malays (Hui, 1985: 49). This imbalance was addressed when, in 1972, the state directed banks to their loans to small Malay businesses. By October 1976, the loan quota to Malays was raised to 20%, from 12% in 1974, and in 1980, the total bank credit to Malays was M\$4,780 million, compared to M\$480 million in 1977 (Malaysia, 1981: 66). In 1974, small Malay establishments accounted for 18.2% of the total, and in 1979, it was 23.2% (Malaysia, 1981). Among the sectors in which the Malay petite bourgeoisie have made the most inroads are the constructors, transport and trading sectors, once the domain of Chinese capital.

The majority of Malays - - 69% in 1985 - - (see Table 3.3) are in the lower class. The two most important categories included in this class are peasants and workers. The working class has emerged from the growth of towns and industries. The present-day peasants are the continuation of their traditional counterparts, and they still form the largest economic category in Malay society. A large number still concentrate on traditional rice cultivation, but now nearly half of Malay peasants are involved in cash crops like rubber and oil palm. They

still live in the villages, but an increasing number have gone into new land settlements where community life is both planned and organized for them by the Federal Land Development Authority (FLDA), under the Ministry of Rural Development. By 1975, the FLDA had resettled 31,000 poor Malay families (Malaysia, 1975).

The workers consist of two categories: those working for the government, and those in the private sector. Those in government service occupy lower positions as laborers or office boys in various departments, or as rank and file in the uniformed police and armed services. As for those in the private sector, they work as laborers on estates and in factories. This group is increasing in size in Malay society, especially with the growth of industries in the urban areas.

The differences between one class and another within the stratification system, viewed from the standpoints of type of work, amount of income and social prestige, distinguish them clearly as classes. For example, socioeconomic differences can be seen clearly among the villagers, the majority of whom are peasants. There are peasants who own land and those who do not. There are those who rent out part of their land or work on their own land, and those who work on land belonging to others.

Their incomes and styles of life are quite different. In fact, even the evaluation of members of the society according to their social positions is different; in other words, there are some peasants who are more respected than others.

The upper class lives in a more opulent style and in more exclusive areas in major cities than other classes. They become members of clubs exclusively for people with similar status. Through these clubs they are also able to strengthen their social relationships, occasionally golfing together, and often discussing or even concluding political and business deals (Syed Husin, 1981).

The middle class, as has already been mentioned, emerged only recently and is much more prominent in urban than rural areas. There may be some shared characteristics between lower-upper and upper-middle categories, or between lower-middle and upper-lower categories, but on the whole it can be said that the middle class stands out quite distinctly from the upper and lower classes. Politically and administratively, the middle class does not have as much power as the ruling elite, most of whom are from the upper class. Yet the middle class tends to be closely linked with the elite because it often provides services to this group. Members

of the middle class sometimes serve as middlemen or even as leaders at the state or district level; only a few of them, especially those from the professional group, manage to achieve positions of national leadership. Economically, their position is midway, their incomes being neither very high nor very low. In daily life they are influenced by Western ways, probably as a result of the education that they received. Yet at the same time they are also attracted to some traditional ways. Some of them appear to have dual personalities, because the opposite pulls of traditional and modern life, or between rural and urban values, often put them in a great dilemma.

In contrast with the other two classes, the lower class has little or no power and influence at all in economic and political spheres. Its members are approached and persuaded to give their votes only during the national election once every five years. That is the only recognized influence that they have. The common factor among members of the lower class is their low position on the economic and social scale. Their living conditions are depressed. In the villages the peasants live in small houses. In towns the workers live in small flats and barracks or, more often, in slum areas.

Even though life is difficult for them, and their status is low, most members of the lower class, especially the peasants and workers, do not yet have many common social ties or shared sentiments. First, they remain a much larger segment of society than the upper and middle classes, and most are widely scattered. Second, although many of the workers who have drifted to the towns still have relatives and friends in the villages, they actually live in two different worlds. They work in places distant from one another and in different occupations - - in the rice fields or rubber smallholdings, and in factories or offices. Their social environments are no longer the same, so their attitudes and values have become divergent. Politics among the two subgroups tends to emphasize their common ethnic identity, but seldom stresses their common fate and destiny as members of the lower class, as victims of exploitation and suffering (Syed Husin, 1981).

### 3.7 THE PSYCHOLOGY OF MALAY ETHNIC CLAIMS

Marxist approaches often view ethnicity as a mask or instrument for advancing underlying material interests. The common argument made is that a specific class faction,

most often the elite, makes general appeals along ethnic lines to gain advantages for itself.

Close observations of the dynamics of ethnic mobilization, however, usually reveal a complex mix of specific and general interests. An important work that takes both of these interests into account is Donald L. Horowitz's *Ethnic Groups in Conflict* (1985). Horowitz wanted to determine what is common to all members of an ethnic group in spite of class differences amongst them. His thesis was that the primary struggle in ethnically divided societies is the struggle over relative group capacity and worth. The main axis of conflict is usually between a "disadvantaged" group, often comprising the indigenous group, and a more "advanced" group, often comprising immigrants. The "advanced" immigrant groups, who became economically more successful, were labelled as industrious, competitive, resilient, while powerful negative stereotypes were attached to the indigenous group. For the indigenous groups the sense of backwardness was profoundly unsettling, giving rise to fears of weakness, unworthiness, and inefficacy.

The common psychological manifestations of this unease were fears of group extinction and a feeling of weakness and helplessness:

These apprehensions about survival, swamping, and subordination reflect the enormous importance accorded to competitive values: a group that cannot compete will be overcome or will die out. Such sentiments have tended to be uttered at times when the groups entertaining them have been politically in a strong position (Horowitz, 1985: 178).

The elites of "disadvantaged" groups, even though they enjoy powerful political and bureaucratic positions, also feel a sense of diminished worth. As Horowitz put it:

If the need to feel worth is a fundamental human requirement, it is satisfied in considerable measure by belonging to groups that are in turn regarded as worthy. Like individual self-esteem, collective self-esteem is achieved largely by social recognition. Everywhere, but especially in developing countries, where the sphere of politics is usually broad and its impact powerful, collective social recognition is conferred by political affirmation. For this reason struggles over relative group worth are readily transferred to the political system (Horowitz, 1985: 185).

These powerful passions motivate the threatened group to use the political system for the assertion of group worth. The threatened group often attempts, if it has the political capacity, to tighten its political control even more and to impose its ethnic symbols on the rest of the society. In order to play a desperate catching up game with the "advanced" group, the leaders of the "disadvantaged" group also commonly use the state to advance the group in the educational and economic fields.

Horowitz conceded that many of the measures taken by the leaders to benefit the "disadvantaged" group often bring disproportional benefits to the elite members of the ethnic group. However, in nearly all circumstances, the non-elite members support the goals of the elite. This critical observation is often left out in class and Marxist approaches to ethnicity (Jesudason, 1987: 16). There is a wider psychological dimension that transcends material interests in ethnic conflict.

Horowitz's argument that ethnic conflict is primarily a struggle over relative group worth and capacity is a powerful one. It gets to the heart of the emotional and sometimes bloody side of ethnic contention. Even "advanced" groups, because they might be in a politically subordinate position, can also experience group weakness and attempt to struggle for political parity.

However, Horowitz's analysis needs to be extended to help us understand how the leaders of a "disadvantaged" group might act with regard to the economy. Horowitz was relatively silent on elite attempts to increase group economic capacity because he concentrated on the political sphere; in places where he did address economic policies, they were subsumed under attempts to increase group worth.



Since Horowitz's basic argument is rooted in group psychology, he used the terms group worth and group capacity interchangeably. However, group worth is a psychological construct while group capacity is an objective system-wide capacity. When leaders try to gain greater system-wide capacity, many objectives are served. Besides increasing group worth, greater economic power allows political elites to channel greater material benefits to their supporters. We cannot exclude from this analysis the leaders' critical goal of obtaining and maintaining power in a politically competitive system, comprising both inter-ethnic and intra-ethnic competition.

There are three ways in which increasing economic group capacity helps the ethnic leaders of the Malays, realize the goals of maintaining political power and bolstering group worth. Two of them can be regarded as bestowing economic and social benefits on the ethnic group, while the third is psychological and in line with Horowitz's notion of increasing group worth.

The first is the provision of economic and social benefits to the Malays. Through regulating the enterprises of ethnic outsiders and expanding the state enterprise sector, new opportunities for wealth, income, education and employment can be provided to the ethnic group. There

is plenty of room for the Malay elites to benefit disproportionately. Yet if the elites depend on a wide segment of the population for support, there will be pressure to distribute more material and social benefits.

Second, increasing Malay economic and social capacity can bring support for the leaders even from ethnic members who do not benefit from existing policies. This is because they find the group's increased control of resources preferable to non-control. In the latter case there is no possibility of benefit, while chances are improved with greater group power. From visible evidence that some Malays' circumstances have improved (see Table 3.2) an individual can hope that his time or his children's will come. Hirschman has termed this phenomenon the "tunnel effect" (Hirschman, A., 1973). During rapid growth, those left behind might be willing to tolerate some degree of inequality because they take the increase of living standards of their peers as a predictor of their future situation. The present prime-minister of Malaysia, in his book, *The Malay Dilemma* (1970) expressed a view approximating Hirschman's "tunnel effect" when he defended the small group of Malay company board directors that emerged in the 1960s:

These few Malays, for they are still only very few, have waxed rich not because of themselves but

because of the policy of government supported by a huge majority of poor Malays. It would seem that the efforts of the poor Malays have come to enrich a select few of their own people. The poor Malays themselves have not gained one iota. But if these few Malays are not enriched, the poor Malays will not gain either. It is the Chinese who will continue to live in huge houses and regard the Malays as only fit to drive their cars ... (Mahathir Mohamad, 1970: 44).

Finally, going beyond the utilitarian logic of tangible and expected benefits, increased Malay economic capacity also enhances group worth, in the sense in which Horowitz used the term. This idea refers to ethnic members gaining status and a sense of competence from the success of a few of their ethnic counterparts. Horowitz regarded vicarious satisfaction as playing an important role in the constitution of group worth:

Because of the element of derivative prestige, the symbolic claims of unranked ethnic groups tend to be consonant with the ambitions of their elites. It is a point of recurring befuddlement and frustration among politicians of the left, but it is undoubtedly the case that vicarious satisfaction plays an important part in the attribution of significance to the ethnic composition of the civil service. And the quest for this symbolic satisfaction is no chimera (Horowitz, 1985: 226).

However, the notion of group worth as derivative prestige and vicarious satisfaction is too narrow. It is a satisfaction that is at best ephemeral, such as when a poor Malay experiences a transfer of pleasure by watching

his rich ethnic counterpart drive an expensive car. There is another deeper idea of individual Malays enjoying greater worth from the successes of their ethnic counterparts - it is the empowering role of group worth. When a few Malays achieve success in areas where the Malays are widely regarded as not capable, the rest can now view themselves in a more positive light. Feelings of envy and jealousy might occur within the ethnic group, but in the context of inter-ethnic contention for recognition and worth, the less successful may have a stake in defending the nouveau riche.

It is difficult to know how long Malay individuals who are not benefiting from policies that increase group worth and capacity will continue to support the Malay political and administrative elites. Just as the hope for future benefits must at some point square with the receipt of actual benefits, once group members take for granted their efficacy and competence, their demands will probably shift to the social and economic sphere.

## Chapter IV

### THE STATE'S INTERVENTION STRATEGY IN HIGHER EDUCATION

#### 4.1 INTRODUCTION

There has been general acceptance of the idea that higher education should play a leading role in the development of the societies and nations in which it exists. It is expected to perform such functions as teaching, service and research, creating and transmitting new knowledge, and producing the highly skilled manpower needed by its society. Thus, higher education functions as a powerful instrument for economic, political, social and cultural change at least in developed societies. It has become a social and economic investment for new nations as well.

Higher education has been expensive both to establish and to run. This has been especially true in developing countries. As a result, it has depended on the government to a very large extent for financial support. This obligation has compromised the independence of higher education in determining its roles in society. The emphasis placed by higher education on its role as an agent of change and development in developing countries

has been a direct consequence of this sense of monetary obligation. Nevertheless, higher education must be recognized as a center of thought and learning, for it is the apex of institutions of training as well as the "fountain of ideas and spiritual leadership" (Robbins, L., 1966: 5). Blaise (1977: 148) attributed the following responsibilities to higher education: to develop a sound foundation of ethical, moral and aesthetic values; to train professionals; to conduct research; and to offer continuing education tailored to the needs of special audiences.

In Malaysia, because of the nature of its plural society, a multiplicity of functions have been attributed to higher education, ranging from development, modernization and social change to poverty eradication, restructuring society, nation-building and achieving national integration and unity (Malaysia, 1971, 1976, 1981).

The tragic events of May 1969 had a great influence on the formulation of the Second Malaysia Plan for the period 1971-75. Out of this Plan emerged the New Economic Policy, which identified two fundamental aims:

- i) The eradication of poverty by raising income levels and increasing employment opportunities for all Malaysians irrespective of race;

- ii) The acceleration of the process of restructuring Malaysian society to correct the economic imbalance so as to reduce and eventually eliminate the identification of race with economic function.

The rationale behind the New Economic Policy is based on the recognition that national unity in Malaysia is the pre-requisite for development in all aspects of life. In turn, this depends on the gradual elimination of social and economic inequality, for the sense of social injustice emerging from inequality not only inhibits social gains, but it can also lead to divisive reaction and conflict. It is hoped, therefore, that raising the levels of income, especially the disadvantaged groups, will do more than just raise people's purchasing power; it should bring about greater self-respect and higher morale, and should diminish the sense of isolation and antipathy towards those who have more. This should assist in the promotion of national integration, and encourage a greater sense of participation in national life. Likewise, the identification of ethnicity with economic status is also a potentially dangerous feature in a plural society, and its elimination is important to prevent further civil discord. These new objectives have been incorporated in the Third Malaysia Plan for the period 1976-80.

It is in the above context that university education in Malaysia functions today. As an integral part of society, the universities cannot but be influenced and shaped by the economic, socio-cultural and political realities that surround them. This means that the new perspectives of development should be reflected in the education sector, where the need is for educational policies to respond to new national objectives. In Malaysia this role is very clearly stated in both the Second and Third Malaysia Plans. In the former it is recognized that:

The realization of the full potential of the vast human resources of the country is a basic challenge in national development ... Besides having a strong manpower orientation, education and training programs will contribute significantly towards national unity. They will play a vital role in increasing the productivity and income of all Malaysians, as well as the greater urbanization of the Malays and other indigenous people by facilitating their participation in modern economic activities. A major objective in the Second Malaysia Plan period will be the consolidation of the education system so as to make it an effective vehicle for the achievement of these important objectives of national development.

The Third Malaysia Plan, on its part, saw the need for

a long-term plan for the development of higher education consistent with the socioeconomic objectives of the New Economic Policy [which] will be formulated in the light of manpower needs and the physical and financial requirements of the country, keeping in mind the need to avoid duplication.



In turn, the government expects that the universities will play a key role in the economic and social development of the country. The fact that education is seen as an essential social force interwoven throughout the social, economic and political development process has always been recognized. Moreover, given the need for a close relationship between education and national development, Sharom (1980) identifies four main objectives of universities in Malaysia:

- i) The overriding goal of the universities is to assist in the promotion of national integration and unity. It is hoped that this will be achieved through their teaching as well as non-curricular programs, and through the use of the national language - Malay - as the principal medium of instruction. In this manner the gradual molding of moral discipline and the inculcation of national values will lead towards this fundamental aim.
- ii) Since trained and skilled manpower is one of the most critical economic requirements confronting institutions of higher learning in developing countries, meeting the manpower needs of the nation is a particularly important objective of the universities. In this area the crucial consideration is the mutual compatibility between the institutions which prepare people for meaningful employment, and the national economy which has to absorb them. For Malaysia this also means that the education system as well as the programs of training have to be developed with and oriented toward a greater emphasis on science and technology.
- iii) In line with the national policy of trying to rectify existing imbalances in educational opportunities among racial and income groups, rural and urban areas, and between developed

and less developed regions, the universities have adopted this as another important objective. Towards this end the increase in Malay enrollment in universities is a deliberate policy in order to redress imbalances in jobs and occupations at all levels. But because Malaysia is a plural society, the policy is also to ensure that there will be an equitable distribution of places in local universities for other Malaysian students as well; after taking into account the overall distribution of students in tertiary institutions at home and overseas.

- iv) Finally, through their research function the universities realize that this has to be geared towards studying and finding solutions serious national problems.

#### 4.2 HISTORICAL BACKGROUND OF MALAYSIAN HIGHER EDUCATION

The system of higher education that took root in the multi-ethnic society of Malaysia was transplanted from Britain to Malaysia during British colonial rule. Therefore, not surprisingly, the British system of higher education was to a large extent replicated in the higher education milieu of the country and formed the basis of the higher education system of Malaysia from the beginning. The historical origins and growth of this higher education system can be seen in four specific stages. First, the implantation and development of a higher education system in Malaysia and Singapore before

Malaysia's independence in 1957; second, the establishment of the University of Malaya in Kuala Lumpur in 1961; third, the establishment and growth of three new national universities and an International Islamic University after 1969; and, finally, the upgrading of the Agricultural and Technical Colleges in 1971 and 1972, respectively, to full university status.

Basically, for functional and political reasons, the British colonial state sowed the first seeds of a higher education system in the country in 1905 with the establishment in Singapore of a British-modeled professional medical school, closely linked to the British system. In 1911, the school received a gift of M\$20,000 from the King Edward Memorial Foundation for the endowment of a chair of Physiology. In recognition of the gift and its considerable academic expansion and restructuring, the school was renamed the King Edward VII College of Medicine in 1921. Dentistry was added in 1929. The College, which was government financed and controlled, maintained high standards in both its teaching and output of graduates. In 1916, the British General Medical Council of Great Britain granted its recognition of the college (Carr-Saunders, 1961). The main function of the college was to train locals for diplomas in the professions of medicine,

dentistry and pharmacy, to serve the health and medical needs of the colonial state.

In 1928, the colonial state, in commemorating the centenary of the founding of Singapore by Sir Stamford Raffles, established a second tertiary institution called Raffles College. Raffles' dream was that the college should develop into a learning and intellectual center as well as a business and commercial center. According to Lady Raffles (1839: 79; cited from Ibrahim Abu Shah, 1987:152) from the beginning Raffles had a strong vision of an

... institution in the nature of a native college, which shall embrace not only the object of educating the higher classes of the native population, but at the same time affording instruction to the officers of the Company in the native languages and of facilitating out more general researchers into the history, condition and resources of these countries.

The British government wanted it to "provide for the advancement of the education of the colony with a view of laying securely the foundations upon which a university may in course of time be established" (Colonial Office, 1939, cited from Robiah, 1980: 18).

The College, though financed by the colonial authorities, was controlled by an independent Council with an adequate number of representatives from the colonial

state to steer policy issues that were in the interest of the colonial state (Selvaratnam, 1985: 477). It had a Senate which controlled academic matters. It provided both Malaysians and Singaporeans with a liberal education through an English medium based on the British model, and courses in English, geography, history, economics, physics, chemistry, mathematics and education at a diploma level were provided. This was further reinforced by the usage of reading and reference material which were basically British in content and character. Most of the graduates were absorbed as teachers in the growing urban-biased English medium schools which were established under the colonial education system. The small number of Malays, usually from the upper crust of Malay society, who graduated from the college with diplomas were mainly recruited into the Malay Administrative Service (MAS), a lower echelon of the prestigious and then exclusively European-manned Malaysian Civil Service (MCS).

As early as 1937, local requests for a university in the country were brought up in legislative councils and the local press (Wong, 1971). A local university was favored because it could meet the local demands for wider participation in the administration of the country. The Colonial government responded by setting up a Commission

of Higher Education, under the chairmanship of Sir William McLean, in 1939 to study such requests and needs. The Commission was of the opinion that the time had not yet come for the establishment of a university, but it recommended the amalgamation of the existing King Edward VII Medical College and Raffles College into a university college as a preliminary step (Colonial Office, 1939: 90, cited from Robiah, 1980: 18). The recommendation, however, was not implemented because of the advent of the Second World War (Wong, 1971).

Two new commissions to study higher education were established after the war. The Commission of Higher Education in the Colonies, with Justice Asquith as the chairman was set up in 1943; and in 1947, a special Commission on University Education in Malaya, with Sir Alexander Carr-Saunders as the chairman, was established. While the Commission of 1943 recommended the evolutionary approach with the establishment of a university college as a preliminary step (Colonial Office, 1945: 13, cited from Robiah, 1980: 20), the Carr-Saunders Commission recommended the immediate amalgamation of the King Edward VII Medical College and Raffles College, and the granting of university status to it (Carr-Saunders, 1961). As a result of the recommendation of the Carr-Saunders

Commission, these two institutions were amalgamated on October 8, 1949 to form the nucleus of the autonomous English medium University of Malaya in Singapore, with degree-granting status. This recommendation, which was hailed as liberal and sympathetic to the aspirations of the people of the country (Lim Tay Boh, 1948:iii), was contrary to the decisions taken by the prewar McLean Commission and the immediate postwar Asquith Commission. Both of these commissions had recommended the establishment of a University College linked with the metropolitan-based University of London for an adequate transitional period before a full-fledged university was established - an experiment that had been used in such former colonies as Sri Lanka, Nigeria and the West Indies (Selvaratnam, 1985: 482). Initially, the University of Malaya had three faculties - - Arts, Science and Medicine, including Dentistry and Pharmacy. Over the years, Education (1950), Engineering (1955), Law (1957), and Agriculture (1961) were added.

In 1954, a Joint Committee of the Governments of the Federation of Malaya and Singapore was set up to make recommendations for the future development of higher education in both countries. The Committee, in its recommendation, made an observation that two universities

would soon be needed because of the rapid growth in the number of students, and that one should be situated in Singapore, and the other in the Federation (Malaya, 1957: 10).

On the eve of Malayan independence in 1957, the then Government of the Federation of Malaya and Singapore appointed a Commission under the chairmanship of Sir Robert Aitken, the Vice-Chancellor of the University of Birmingham, to review the constitution, working and finances of the University of Malaya in light of the experience and rapid expansion of the last seven years, and of the prospective growth in the near future, and to make recommendations as to whether or not it was feasible to establish a new university in the Malaysian capital, Kuala Lumpur. The main goals of this proposed university were two-fold. First, it was intended to make provision for an increasing demand for trained manpower, both as a result of the implementation of a "Malaysianization" policy, i.e., the replacements of expatriates with Malaysians, and the rapid development and expansion of public and private sectors with independence. Second, the proposed university had to meet the increasing demand for university education by the rapidly growing school-leavers and aptly qualified student population. In light of the



Commission's Report (Singapore, 1957) and the recommendation of the Joint Constitutional Committee (Federation of Malaya, 1958) appointed by the two governments, legislation was passed in November 1958 making provisions for the establishment of two autonomous divisions of equal status of the University of Malaya in each of the two countries. After the legislation came into operation on January 1959, the University of Malaya in Singapore and Kuala Lumpur each had a principal, a Divisional Council and Divisional Senate, while the University of Malaya as a whole was administered by the Vice-Chancellor and a Central Council as well as a degree-granting and coordinating body. It also combined to maintain a common Court and Guild of Graduates. However, each of the Divisions had a large measure of administrative and academic autonomy in order to pursue independently various means to meet the manpower demands of the respective territories.

In 1960, the independent government of the Federation of Malaya, realizing the absence of an exclusively national university within its own territorial boundary, decided that the autonomous Kuala Lumpur division of the university should become the sole University of Malaya. Similarly, the government of the Republic of Singapore

decided that the Singapore division of the university should become the University of Singapore. It is now known as the National University of Singapore (NUS), after its amalgamation with the Nanyang University in 1980. The necessary legislation was passed by both countries in 1961 to formalize the establishment of two separate universities as of from January 1, 1962.

Since its inception in 1959 as a division of the University of Malaya in Kuala Lumpur, the development of the University of Malaya has been rapid in terms of both student and staff numbers and infrastructure facilities. Student numbers rose from 323 in 1959 to 1,341 in 1962. They continued to rise to 2,835 in 1965, 4,560 in 1967, and 8,519 in 1973; in 1985 the total stood at 9,890, which included postgraduate enrollment as well. Since 1973 the University has not only been consolidating its past expansion and growth, but has also been moving more and more towards postgraduate studies and advanced research. This has now been formalized and was further consolidated with the establishment of the Institute of Advanced Studies in July 1979. The basic aim of this institute is eventually to meet the country's major requirements for highly trained manpower necessary for research, teaching and industry. The University of Malaya has nine faculties:

the faculties of Agriculture, Engineering, Arts, Economics and Administration, Education, Medicine, Science, Dentistry and Law. Chinese, Indian and Malay Studies are also offered at the university.

While the University of Malaya was putting down deeper roots and expanding to meet the unprecedented increase in demand for student places in the various disciplines, the then government of the Federation of Malaya decided that a Higher Education Planning Committee should be established under the chairmanship of the Minister of Education "to review the arrangements in the Federation of Malaya for higher education and to make recommendations for the development and improvement of such education in the light of the foreseeable needs and financial resources of the country" (Malaysia, 1967: 163). The Committee, in its report released to the public in 1967, recommended that on a long term basis 20% of the relevant age group should be provided with facilities for higher education. Focusing on this, the Committee recommended the following (Malaysia, 1967: 208):

- i) The Technical College should convert into a College of Technology and enjoy a status comparable to that of a university and courses leading to professional qualifications in Agriculture, Surveying, Town and Country Planning as well as Engineering should be made available;

- ii) the Faculty of Agriculture should be expanded rapidly;
- iii) a University College should be established in Penang and be ready to admit students in 1970;
- iv) in addition to courses in the medium of English, more Arts and Science courses, including courses in Technology, in the medium of the National Language should be offered at both University and College levels as soon as practicable;
- v) facilities should also be made available for training for high level manpower in the following fields: Accountancy; Forestry; Fisheries; and Journalism.

Under these recommendations the first new university to be established was the University of Penang, now known as Universiti Sains Malaysia (The University of Science, Malaysia) at Penang in 1969. It expanded rapidly and in 1971 took the initiative to offer the first off-campus academic programs in Malaysia. It had an initial student population of 271 in 1970, which rose in 1973 to 1,543 and in 1985 the student number stood at 8,862, which included the off-campus enrollment. The University of Science's immediate objective was to supplement and complement higher education in the areas of Science and Applied Sciences, Pharmaceutical Sciences, Building Sciences and Technology, Social Sciences, Humanities and Education.

In the following year, the National University of Malaysia (Universiti Kebangsaan Malaysia), was established

in Kuala Lumpur. Its student numbers also rose rapidly, from 169 in 1970 to 1,481 in 1973, and 10,220 in 1985. The University was the first degree-awarding institution in Malaysia to adopt the National Language as its medium of instruction in all its academic discourses. The courses offered range from Medicine, Humanities, Economics and Management, Teacher education, Sciences to Islamic Studies. In 1984, yet another new university, Universiti Utara Malaysia (Northern University of Malaysia) was established in Kedah, the northern state of Peninsular Malaysia. Its student enrollment stood at 604 in 1985. It offered courses in Accountancy, Economics, Business Administration and Public Administration. In addition, an International Islamic University situated in Kuala Lumpur, commenced its first session in July 1983. The purpose of this University is to strengthen cooperation and friendship between Islamic intellectuals, to provide facilities for Islamic studies and to train skilled manpower for development within the framework of Islamic principles. The media of instruction are Arabic and English. This University stresses the philosophical assumptions and beliefs of Islam regarding knowledge.

A School of Agriculture was opened in 1931 for training agricultural assistants to work in the

Agricultural Department. When the school re-opened after World War II, the colonial government decided to raise its status to a College of Agriculture, offering a three-year diploma course that provided training in the science and practice of tropical agriculture, with special reference to local crops and conditions (W.H. Kee and T.T. Hong, 1971: 161).

Similarly, a Technical College was started in 1925 with the purpose of training middle-level technical personnel to man the Colonial States' Public Works Department, the railways, the Survey Department and other related public utility service departments. In the years 1971 and 1972, both these institutions were upgraded to university status. In 1985 their student numbers, at both diploma and degree levels, stood at 8,412 for Universiti Pertanian Malaysia (Agricultural University of Malaysia) and 7,472 for Universiti Teknologi Malaysia (University of Technology , Malaysia). The purpose of the Agricultural University of Malaysia is to provide, promote and develop higher education in the fields of agriculture, forestry, veterinary sciences, natural sciences, agricultural engineering and technology, social sciences and teacher education. On the other hand, the role of the University of Technology is to promote higher education in the fields

of sciences, engineering sciences, technology, architecture and teacher education (Ibrahim Abu Shah, 1987: 14).

Besides these seven universities, there are two other higher educational institutions granting diplomas and degrees in the various fields of studies. The first is Tunku Abdul Rahman College (TAR), which was established in 1969 in Kuala Lumpur. TAR College was the brain-child of the major partner of the ruling National Front, the Malaysian Chinese Association (MCA). Its establishment was to provide higher educational opportunities for the Chinese population in the areas of sciences, technology, commerce and business, accounting and arts. If TAR College was established to cater to the higher educational needs of the Chinese population, the establishment of the MARA Institute of Technology (MIT) in Petaling Jaya, Selangor in 1967 was aimed at providing higher educational opportunities for the Malays and other indigenous populations from Sarawak and Sabah, especially those from the rural areas. MIT grew out of the Dewan Latihan RIDA (Training Center of Rural Industrial Development Authority) established in 1954 to prepare young Malays in commerce and industry. At present the institute is offering courses at certificate, diploma, advanced diploma

and degree levels in various fields of studies, including courses in management and administration, technology, and business.

The importance of higher education in Malaysia is so greatly emphasized by the government that a substantial amount of educational expenditure has been allocated. A total of M\$524 million, or 19% of the 1969 government expenditure budget was set aside for education, of which M\$31 million was for university education. The education budget increased to M\$851 million, or 24% of the total government expenditure in 1974. By 1975, the total expenditure budget for education rose further to M\$1,098 million, out of which M\$169 million of recurrent as well as capital expenditure was allocated for universities and colleges (Malaysia, 1971 and 1975).

Through the preceding discussion of the background of higher education in the country, one very significant point that can be observed is that the rapid expansion of higher education in Malaysia took place after the May 13, 1969 racial riot. This phenomenon was due to the fact that after the 1969 racial riot, the desire to redress the inequities in the opportunity structure of Malaysian society became a significant expansionary factor in higher education. The educational policy of the government after



the incident was to increase Malay participation in tertiary education in accordance with the Malay proportion of the population, with the ultimate objective of achieving racial integration and harmony. Since higher education in Malaysia is under the control of the Ministry of Education, the government's strategies to redress the inequities have been in the form of various national educational policies. With the realization that education, particularly higher education, is the key to the economic advancement of the Malays who have been left far behind by other ethnic groups, the government has vowed that all necessary steps will be taken to ensure the achievement of its objectives (Ibrahim Abu Shah, 1987: 147). Preferential treatment and constitutional amendments are examples cited by the government of its efforts to rectify the situation. The years after 1969 witnessed deliberate government intervention in Malaysian higher education.

#### 4.3 INTERVENTION STRATEGIES IN HIGHER EDUCATION

Until 1969, the University of Malaya was the only university in the country. A comprehensive study undertaken by the committee appointed by the National Operation Council to study campus life at the University

of Malaya in 1969 (Malaysia, 1971) revealed that an extreme ethnic imbalance existed in the student population. For the academic session of 1969/70, only 36% of the total population were Malays, a figure which had not changed radically from 1959, when the university first began with an enrollment of only 20% Malays (see Table 4.1). There was also an imbalance among the ethnic groups by courses. Statistics compiled by the Committee showed that Malays predominated in the humanities and liberal arts, non-Malays, the sciences. In academic sessions of 1959/60 and 1964/65, almost 94% and 85%, respectively, of Malays enrolled in the humanities and liberal arts, whereas the majority of non-Malays were in the sciences (see Table 4.2). These imbalances, coupled with the trauma of the May 13, 1969 riot, caused the government to undertake a critical analysis of the various policies, which was later embodied in the New Economic Policy. As far as the role of higher education is concerned, the government sees it as "more than any other level of education directly involved in the restructuring of society" (The Minister of Education, The New Straits Times, August 21, 1976). It is "not only the expansion in the academic field that is the concern of the Ministry [of Education], but the actual student composition in each

faculty in every university needs to be regulated" (The Minister of Education, The New Straits Times, August 21, 1976).

Table 4.1

ANNUAL ENROLLMENT OF STUDENTS (WITH ETHNIC BREAKDOWN)  
IN THE UNIVERSITY OF MALAYA 1959-1970

YEAR	MALAYS	%	NON-MALAYS	%	TOTAL
1959/60	62	19.5	256	80.5	318
1964/65	543	24.7	1659	75.3	2202
1969/70	2373	35.8	4026	64.2	6633

Source: Malaysia, 1971, The Majid Report, Table 1.

Table 4.2

PERCENTAGES DISTRIBUTION OF STUDENTS BY ETHNIC GROUPS  
BETWEEN HUMANITIES AND LIBERAL ARTS AND SCIENCES IN THE  
UNIVERSITY OF MALAYA 1959-70

YEAR	ETHNIC GROUPS	HUM & ARTS	SCIENCES
1959/60	MALAYS	93.6%	6.4%
	NON-MALAYS	40.6%	59.4%
1964/65	MALAYS	84.5%	15.5%
	NON-MALAYS	43.9%	56.1%
1969/70	MALAYS	62.7%	37.3%
	NON-MALAYS	31.0%	69.0%

Source: Malaysia, 1971, The Majid Report, Table III.

The recommendations of the Committee to study the Campus Life at the University of Malaya (see Chapter II) were adopted as guidelines for reforming student admission and ethnic group imbalances. In addition, in 1971, the Federal Government amendment of Article 153 of the Constitution required that there should be reserved for the Malays and the natives of Sabah and Sarawak a reasonable proportion of places in the universities and in those courses where their numbers are disproportionately small (Abdul Razak, 1971: 12). Under the Universities and

University College Act of 1971, it is stipulated that the Minister of Education is given full responsibility for the general direction of higher education and its administration. A Higher Education Division was established within the structure of the Ministry of Education to coordinate the administration of higher education policy, as well as to implement policies pertaining to higher education in the country. The functions of the division include:

- a) To advise the Minister on the development of the existing universities and the establishment, organization and development of new universities.
- b) To coordinate development programs of universities and other higher education institutions in accordance with provisions in the constitution.
- c) To control financial grants to universities and other institutions of higher education.
- d) To process proposals for new academic programs or for setting up new faculties for the local universities and other institutions of higher education.
- e) To process applications for admission into local universities and other institutions of higher education.
- f) To gather and compile statistics on students studying in local and foreign institutions of higher education.
- g) To act as the Secretariat for the Higher Education Committee as well as the Vice-Chancellors' Conferences.

The functions of the Higher Education Division of the Ministry of Education, especially items "b", "c" and "f," indicate the government's intervention strategies in the development of higher education in Malaysia. The government coordinates the development programs of universities and processes applications for admission, in accordance with provisions in Article 153, directly reserving for Malays and the natives of Sabah and Sarawak a reasonable proportion of places in higher education. The "reasonable proportion" was defined by the Minister of Education as the proportion of ethnic composition of the population. In addition, it was also stipulated under the Universities and University College Act, 1971, Part IV, Section 47, that universities have to admit all students who are awarded scholarships out of public funds, provided they have the necessary qualifications, a provision to be waived only with approval of the Minister of Education (Malaysia, Laws of Malaysia, 1971, Act 30). At the university level, the Universities and University College Act, amendment 1975, allocated heads of government departments or their representatives to serve as members of the Councils of all universities, which provide additional strategies in pursuit of implementation of policies "to increase enrollment among the Malays and

other indigenous people in areas where they are in short supply in line with the overall manpower needs and the long-term objectives of restructuring the racial composition of employment in professional, technical and managerial occupation" (Malaysia, 1976, Third Malaysia Plan, 1979-1980: 404).

Like any other developing country, Malaysia realized the importance of training manpower for development, particularly for economic growth. Malaysia initiated its first manpower planning with the establishment of the Higher Education Planning Committee (HEPC) in 1962. Its members and working committees consist of cabinet ministers, senior government officials and the Vice-Chancellor of the University of Malaya (Malaysia, Report of Higher Education Planning Committee, 1967: 163-175). The guidelines for the HEPC are to make recommendations for the development and improvement of higher education in the light of foreseeable needs and financial resources of the country. It is also charged with suggesting ways and means to ensure an adequate supply of trained manpower for the economic, social and cultural development of the country. Using these guidelines, the HEPC assesses the manpower requirements, and makes projections for student enrollments by courses of studies at the upper secondary,

college and university levels of education. It also determines priorities and expansion at those levels.

The Third Malaysia Plan (1976-80) provides guidelines for manpower development within Malaysia. It states objectives and the measures needed to achieve them, and it also makes projections of manpower requirements for sales, production workers, professional, technical, administrative and clerical (Malaysia, 1976: 150). The plan also enumerates measures to be taken by higher education:

- a) The intake of liberal arts students will be progressively reduced from 54.5% in 1975 to 46.5% in 1980.
- b) Engineering, Science, Medical, Agriculture and Business will be emphasized. The annual output in proportion to total output for degree holders will increase from 45.5% in 1975 to 54.4% in 1980.

The Fourth Malaysia Plan (1981-1985) provides similar strategies for higher education with emphasis on reducing further the annual output for degree holders, with 40% in liberal arts to 60.0% in sciences (Malaysia, 1981: 405). The Fifth Malaysia Plan (1986-1990) sets the output of liberal arts and sciences at 1:4.2 (Malaysia, 1986: 561).

There are two aspects of university planning: policy planning and program planning. Policy planning involves the more intangible concerns of an enterprise and



entails long-range objectives, while program planning deals with ways and means whereby policy objectives can be realized. Generally, in Malaysian higher education institutions, policy planning takes place at the Federal level, program planning at the institutional level. Planning the national developmental policies is the prerogative of the Federal Government. In areas which are related to their concerns, the universities and other statutory bodies are called upon to participate in the initiation and deliberation of policy proposals (Malaysia, 1976: 264). In the planning of educational policies, particularly those which directly affect the universities, the government and its planning agencies hold general discussions and informal exchanges of views with the Committee of the vice-chancellors. This Committee advises the Ministry on matters requiring government decisions, while the Ministry coordinates and channels to universities any new governmental policies and needs (Murad, 1971: 41). At the institutional level, there are central committees to oversee the programs, facility, and physical and financial planning.

The administrative structures of Malaysian universities are basically patterned after those of the British universities - - with the Court, the Council and

the Senate as the principal governing bodies. The Court is the highest authority and serves as a link between each university and the outside world. The Council is the body responsible for the policies and decisions relating to non-academic (and in some cases academic) matter within each university. The Senate is the body which controls academic matters, including instruction, research, examinations and rewarding of degrees, diplomas and certificates (Malaysia, Universities and University College Act, 1971, Part III, Section 2). Routine administrative matters fall under the jurisdiction of the chancellor, the vice-chancellor and his deputies, the registrar and the bursar. Various boards are instituted in each university to smooth administrative processes. These include the Board of Studies, the Board of Students' Affairs, and the Board of Selection of Staff ( Part II and III, section 5,6,10). Vice-chancellors and their deputies, the members of the Court and the Council are appointed by the Minister of Education. Since 1970, all vice-chancellors are Malays.

Thus, the government's policy departure and its direct intervention in the administrative structure of universities, have enabled it to change the ethnic mix of the student population in Malaysian universities. In

particular, the government's intervention has enabled the Malays and the natives of Sabah and Sarawak students to gain a dominant position in terms of ethnic numbers in Malaysian higher education. It has also helped to correct the imbalance in course offerings between Malay and non-Malay students.

To accelerate and actively facilitate access to higher education for Malays and the natives of Sabah and Sarawak, a new national education policy was spelled out in 1969 by the Minister of Education for immediate implementation. Through this new policy, a timetable was specified for the conversion of all English-medium schools to National schools from the year beginning in January, 1970, with Bahasa Malaysia (Malay language), the national language of Malaysia, as the sole medium of instruction and public examination for all subjects, and with English language as a compulsory second language (Mustapa, 1987). Provisions were also made to enable non-Malay students to study their mother tongue if they so desired. By the year 1983, the universities in the country would use Bahasa Malaysia as the sole medium of instruction and examination for all courses, other than languages. The main objective in promoting Bahasa Malaysia as the sole medium of instruction at all levels of education is to provide for

national identity and promote unity. A university degree, as has been demonstrated for a long time in the Malaysian context, has been a passport to long professional life, security, comfort and status. In the past, when English was used as the medium of instruction in higher education, it was "linked with the feeling of unfair competition on the part of the Malay medium students vis-a-vis the English medium students, who are at a decided advantage" (Malaysia, 1971, The Majid Report: 50). Therefore, the Bahasa Malaysia policy gave the growing number of aspiring Malay students, particularly from the rapidly growing Malay medium schools, access to the various post-secondary schools and tertiary education institutions, which provide the main channel of upward mobility (Wong, 1977: 110).

The above policy of preferential treatment, in the form of government intervention strategies, to benefit the special needs of the Malays, became an outstanding characteristic in the development of higher education in Malaysia after 1970.

#### 4.4 IMPLICATIONS OF STRATEGIES

##### 4.4:1 THE STATE OF EDUCATION DEVELOPMENT BEFORE 1970

Malay advancement in higher education would not be meaningful should the majority of Malays continue to opt for humanities. The paucity of Malays in science and science-related subjects was another important imbalance that needed correction. Moreover, an aspect of the government's policy of restructuring Malaysian society, as laid down in the New Economic Policy, was and continues to be the task of enlarging the number of Malay professionals in the fields of engineering, business and medicine (Malaysia, 1971, 1976 and 1980). It is in this connection that one should view the changing enrollment patterns at schools and universities in the mid-1970s onwards, the period coinciding with the implementation of the preferential policy in education.

Efforts made to increase the enrollment of Malays and other indigenous peoples from Sabah and Sarawak in tertiary institutions have involved the use of interventionist and facilitative mechanisms. The former involves the government's direct control over the enrollment of students in educational institutions in order to secure the objectives of social restructuring. Facilitative mechanisms have mainly comprises the

improvement of existing schools, the construction of additional buildings and new schools, and the establishment of special educational institutions and programs for Malays and other indigenous peoples.

The paucity of Malays in science and science-related subjects at the tertiary institutions can be attributed to the situation of Malays in the educational structure of the country. The structure of formal education in Malaysia has a 6-3-3-2 pattern. This structure represents the primary, lower secondary, upper secondary and pre-university levels, respectively (see Figures 2 and 3). Children enter primary schools when they reach the age of six plus. Education at this level is free, but not compulsory. The medium of instruction is provided in one of three languages, namely Malay, Chinese or Tamil. For the national primary it is Malay and Chinese or Tamil in "National Type Primary Schools". In 1984, the enrollment rate was 95.0% (Malaysia, 1985). On completion of primary education at the age of eleven plus, pupils are promoted to the lower secondary schools. Pupils from national primary schools will be promoted to Form I, while pupils from national type primary schools are admitted to Remove Classes for a year before proceeding to Form I. The purpose of Remove Class is to enable these pupils to

acquire sufficient proficiency in Malay language, which has been the medium of instruction in all secondary schools since 1976. (Prior to 1976, secondary education was in English and in Malay language - - see Figure 2). At the end of Form III, pupils sit for the Lower Certificate of Education (LCE) examination, conducted by the Examination Council, Ministry of Education. The results of the examination provide the basis for the selection of pupils into upper secondary schools. Based on these results, pupils are also channeled into the arts, science, vocational or technical stream. Upper secondary education covers a duration of two years, from Form IV to Form V. As the pupils are streamed into different tracks, upper secondary education is a more specialized form of general education. Pupils selected for the general academic stream, i.e, arts or science, are placed in normal academic secondary schools, fully residential schools, science secondary schools and MARA junior science colleges. Pupils selected for the vocational and technical streams are placed in vocational schools or technical institutions respectively. The majority of the pupils enrolled in the upper secondary levels are in academic schools, in either the arts or science streams, and in 1984 they constituted 93.0% of the total upper secondary

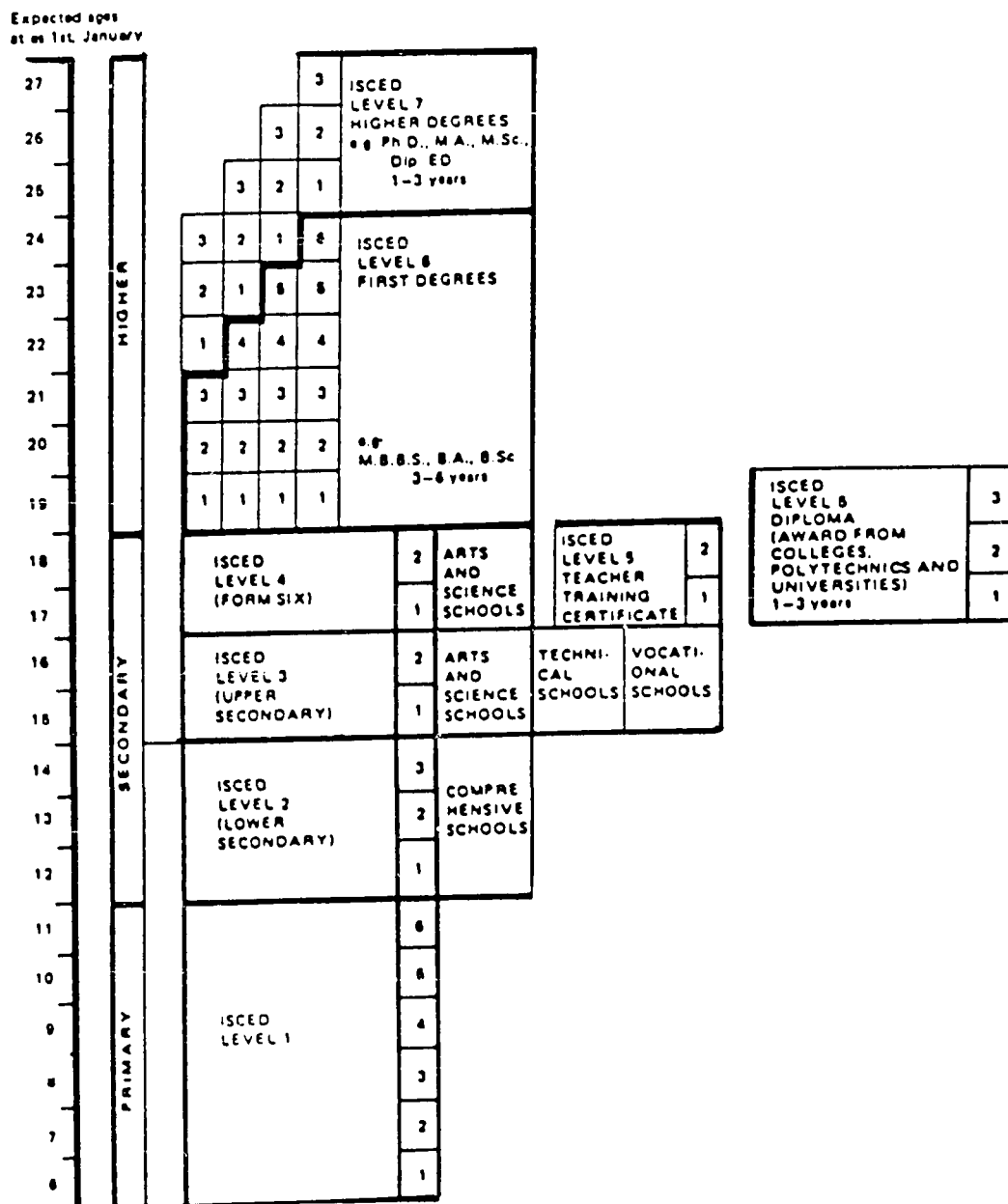
enrollment (Malaysia, 1985). At the end of the two year course, these pupils sit for the Malaysian Certificate of Education (MCE) examination. Based on the examination results, students are selected for the two-year course at the pre-university level (Sixth Form) and the matriculation courses. The goal of education at this level is to prepare students for entry into universities and other institutions of higher learning, while the matriculation course, established in 1974, prepares students in science and science-related subjects to meet the specific requirements of certain universities in specific areas of study. Forms IV and V, in both arts and science, are structured to meet the entry requirement of all universities. At the end of the two years, students following the matriculation classes take the Matriculation Examination conducted by the universities, while those in Form VI sit for the Higher School Certificate (HSC) examination conducted by the Examination Council, Ministry of Education.

In a society where educational credentials to a large extent determine a person's employment opportunities and his social mobility, the effectiveness of the educational system tends to be measured by results on the national examinations for the MCE and HSC. The academic reputation



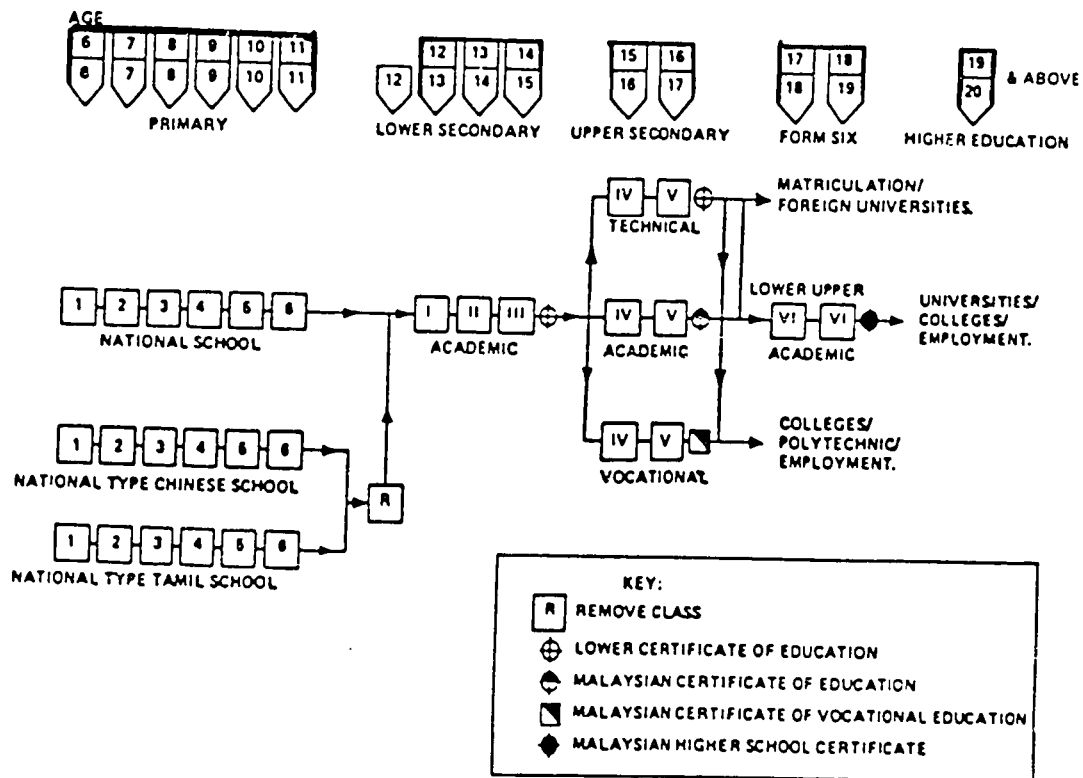
of an individual school tends to be judged by the overall success of its students in these examinations, as well as the number and proportion of grade ones (top grade) obtained in the MCE and HSC. These public examinations are used as a basis for selecting students for higher education. In the employment market, they often determine the person's first employment and his initial salary (Chan, 1975: 43). The competition for jobs as well as for places in the post-secondary educational institutions invests the examination system with the special responsibility of legitimizing educational criteria for status achievement and for the maintenance of the educational system as the primary means of regulating mobility. For these reasons, the educational system tends to become the focal point of ethnic competition for scarce rewards in the society.

Figure 2: STRUCTURE OF FORMAL EDUCATION



ISCED (International Standard Classification of Education)

Figure 3: THE EDUCATION SYSTEM IN MALAYSIA



The relative effectiveness of different types of secondary school is usually judged by the examination results for the MCE and HSC. As can be seen from Tables 4.3 and 4.4, the number of candidates for the MCE from Malay-medium schools increased by roughly four times between 1966 and 1972, from 4,370 to 16,809, although the peak year was 1970, when there were 17,831 candidates. The English-medium schools, starting with a larger base, increased from 20,661 in 1966 to 37,127 in 1972 or about 80.0%.

Table 4.3

MALAYSIAN CERTIFICATE OF EDUCATION EXAMINATION RESULTS  
FOR CANDIDATES FROM MALAY-MEDIUM ASSISTED SCHOOLS

YEAR	NUMBER SAT FOR EXAM.	NUMBER PASSED WITH GRADES			AWARDED GENERAL CERT.	NUMBER FAILED	% PASSED
		I	II	III			
1966	4370	132	512	1928	1049	749	58.9
1967	7772	197	848	3326	1647	1754	56.2
1968	10140	219	1224	4660	2025	2012	60.2
1969	17025	403	1730	6639	3699	4554	51.5
1970	17831	351	1861	7748	4105	3766	55.9
1971	16844	298	1596	7661	4198	3091	56.7
1972	16809	330	1774	7132	4108	3465	54.9

Source: Malaysia, 1973, Ministry of Education,  
Educational Planning and Research Division.

Table 4.4

MALAYSIAN CERTIFICATE OF EDUCATION EXAMINATION RESULTS  
FOR CANDIDATES FROM ENGLISH-MEDIUM ASSISTED SCHOOLS

YEAR	TOTAL NUMBER SAT FOR EXAM	NUMBER PASSED WITH GRADES			AWARDED GENERAL CERT.	NUMBER FAILED	% PASSED
		I	II	III			
1966	20661	2861	3955	5893	630	7317	61.5
1967	26630	3038	4220	6144	916	12312	50.3
1968	25767	3846	4921	6225	7887	2888	53.2
1969	26804	3999	4595	5365	9840	3005	52.1
1970	30560	4940	5602	6481	10055	3482	55.7
1971	30160	5363	6354	6472	9040	2931	60.3
1972	37127	5190	5285	5590	17442	3620	43.3

Source: Malaysia, 1973, Ministry of Education,  
Educational Planning and Research Division.

The average pass rate for Malay-medium candidates in the period 1966-1972 was 55.7%; for the English-medium candidates in the same period it was 53.7%. In 1972, for the Malay-medium candidates, the pass rate dropped from 56.7% in the previous year to 54.9%. For English-medium candidates, however, the rates for these years were 60.3% and 43.3%. This was due in large part to a change in the minimum requirements for obtaining the MCE. From 1970, it was stipulated that a candidate must have the minimum

"pass" in Malay language (the National Language), in addition to passing a minimum number of subjects, in order to qualify for the MCE. It was reported that about half of the total number of 30,560 English-medium candidates failed to qualify because they failed the National Language paper (Chan, 1975: 44).

A comparison of the results of the MCE examinations from 1966 to 1972 shows that while there are very few differences in overall pass rates between Malay-medium and English-medium candidates, there are marked differences between them in the proportion of grades one, two and three obtained, as shown in Table 4.5. Taking the seven year (1966-1972) period as a whole, the Malay-medium candidates obtained 2.1% (1,930) grade one, 10.5% (9,545) grade two, and 43.1% (39,094) grade three, compared to 14.7% (29,237) for grade one, 17.7% (34,932) for grade two and 21.3% (42,170) for grade three in English-medium. While there was a fairly even balance in the distribution of grades one, two and three among the English-medium candidates, the distribution among the Malay-medium candidates was skewed towards the grade threes. Considering the fact that selection for entrance to Form VI gave preference to those with a grade one certificate, the number of students from Malay-medium schools

proceeding to pre-university classes would naturally be much smaller than the number from the English-medium schools. This may be seen from Tables 4.6 and 4.7, which show the results of HSC examinations from 1967 to 1972 for candidates from Malay-medium and English-medium schools. There were more than four times as many candidates from the English-medium schools as from the Malay-medium, though for the MCE examinations, the number of candidates from English-medium schools for the period 1966-1972 was roughly only twice that from Malay-medium schools.

The differences widen dramatically if the comparison is based on the number of full-certificates obtained in the HSC examinations in science and arts. For the period 1967-1972, the total number of full certificates in science for Malay-medium was 141, and in arts, 1,176, representing pass rates of 11.2% and 31.3%, respectively, based on the number of candidates for the examinations in science and arts. For the English-medium, the number of full certificates in science was 8,047, and in arts, 6,249, or 66.6% and 65.2%, respectively (see Tables 4.8 and 4.9).

Table 4.5

COMPARATIVE RESULTS OF THE MALAYSIAN CERTIFICATE  
OF EDUCATION EXAMINATION FOR CANDIDATES  
FROM MALAY-MEDIUM AND ENGLISH-MEDIUM ASSISTED SCHOOLS

YEAR	NUMBER SAT FOR EXAM		% OF EXAMINEES WHO PASSED WITH				GRADE III	
	MM	EM	MM	EM	MM	EM	MM	EM
1966	4370	20661	3.0	13.8	11.7	19.1	44.1	28.5
1967	7772	26630	2.5	11.4	10.9	15.8	42.8	23.1
1968	10140	25767	2.2	14.9	12.1	14.9	46.0	24.2
1969	17025	26804	2.4	14.9	10.2	17.1	39.0	20.0
1970	17831	30560	2.0	16.2	10.4	18.3	43.4	21.2
1971	16844	30160	1.8	17.8	9.5	21.1	45.5	21.4
1972	16809	37127	2.0	14.0	10.5	14.2	42.4	15.1

Source: Malaysia, 1973, Ministry of Education,  
Educational Planning and Research Division.

Note: MM: Malay-medium.  
EM: English-medium



Table 4.6

HIGHER SCHOOL CERTIFICATE EXAMINATIONS:  
CANDIDATES FROM MALAY-MEDIUM SCHOOLS

YEAR	NUMBER SAT FOR EXAM		NUMBER OBTAINED FULL CERTIFICATE		NUMBER OBTAINED STATEMENT	
	SCIENCE	ARTS	SCIENCE	ARTS	SCIENCE	ARTS
1967	78	153	1 1.3%	44 28.8%	52 66.7%	109 71.2%
1968	101	479	6 5.9%	119 24.8%	74 73.3%	359 74.9%
1969	171	566	20 11.7%	150 26.5%	136 79.5%	416 73.5%
1970	275	794	21 7.6%	106 13.4%	226 82.2%	688 86.6%
1971	267	762	34 12.7%	181 23.8%	207 77.5%	580 76.1%
1972	359	1004	59 16.4%	576 57.4%	270 75.2%	428 42.6%

Source: Malaysia, 1973, Ministry of Education,  
Educational Planning and Research Division.

Note: A full certificate signifies that a candidate  
has passed a minimum of 4 subjects simultaneous

A statement certifies that a candidate has  
passed 3 or fewer subjects.

Table 4.7

HIGHER SCHOOL CERTIFICATE EXAMINATIONS:  
CANDIDATES FROM ENGLISH-MEDIUM SCHOOLS

YEAR	NUMBER SAT FOR EXAM		NUMBER OBTAINED FULL CERTIFICATE		NUMBER OBTAINED STATEMENT	
	SCIENCE	ARTS	SCIENCE	ARTS	SCIENCE	ARTS
1967	1421	1160	921 64.8%	880 75.9%	488 34.3%	280 24.1%
1968	1730	1470	1277 73.8%	1133 77.1%	443 25.6%	335 22.8%
1969	1803	1498	1301 72.2%	1046 69.8%	495 27.5%	452 30.2%
1970	2104	1567	1360 64.6%	945 60.3%	741 35.2%	597 38.1%
1971	2412	1802	1582 65.6%	1120 62.2%	812 33.7%	675 37.5%
1972	2611	2092	1606 61.5%	1125 53.8%	976 37.4%	944 45.1%

Source: Malaysia, 1973, Ministry of Education,  
Educational Planning and Research Division.

Note: A full certificate signifies that a candidate has passed a minimum of 4 subjects simultaneously.

A statement certifies that a candidate has passed 3 or fewer subjects.

The problem of Malay representation in higher education may be seen as a reflection of the results of Malay candidates in the MCE and HSC examinations. Malay enrollment in science, engineering and medicine at the University of Malaya had for many years been very low (see Table 4.10). As late as 1970-1971, for instance, Malays represented only 1.3% of total enrollment in engineering, 11.5% in science, and 20.3% in medicine, compared with Chinese representation of 93.1%, 82.0%, and 61.1% in the respective faculties. Considered from another perspective, out of a total 3,123 Malay students, 87.8% were enrolled in arts, education, and economics and public administration, and the balance of 12.2% in science, engineering, agriculture and medicine. The corresponding proportions for Chinese were 44.4% and 56.6%, respectively. Clearly, this imbalance is the result of imbalances at the secondary level, particularly at the pre-university level. As shown in Table 4.9, the output of Malay-medium students with full HSC certificates in science ranged from one in 1967 to 59 in 1972, compared with 921 in 1967 and 1,606 in 1972 for English-medium students, the majority of whom may be presumed to have been non-Malays (Chan, 1975: 51). Therefore, in terms of output of Malay graduates in science and technology, the

undesirable state of affairs is reflected by the fact that during the period 1964-1970, out of a total output from the University of Malaya of 2,337 graduates, there were only 119 Malays, representing 5.1% (see Table 2.3). This indicates that the supply of Malay candidates possessing reasonable qualifications for study in the science and technical faculties was very small. In Table 4.10 it is seen that 42.0% (1966/67), 47.0% (1968/69) and 61.0% (1970/71) Malays were represented in arts faculties, while in science, engineering, agriculture and medicine, the Chinese students outnumbered the Malays by almost four to one that in 1966-1971. The deficiency was especially great for students from the Malay-medium schools, where science and mathematics teaching tended to be abysmal because of the lack of faculties, inexperience of the teachers and shortage of Malay-language texts (Snodgrass, 1980: 250).

Table 4.8

HIGHER SCHOOL CERTIFICATE EXAMINATION IN SCIENCE:  
 COMPARATIVE ANALYSIS OF RESULTS FOR CANDIDATES FROM  
 ASSISTED MALAY-MEDIUM AND ASSISTED ENGLISH-MEDIUM SCHOOLS

YEAR	NUMBER SAT FOR EXAM		NUMBER OBTAINED FULL CERTIFICATE		NUMBER OBTAINED STATEMENT	
	MM	EM	MM	EM	MM	EM
1967	78	1421	1 1.3%	921 64.8%	52 66.7%	488 34.3%
1968	101	1730	6 5.9%	1277 73.8%	74 73.3%	443 25.6%
1969	171	1803	20 11.7%	1301 72.2%	136 79.5%	495 27.5%
1970	275	2104	21 7.6%	1360 64.6%	226 82.2%	741 35.2%
1971	267	2412	34 12.7%	1582 65.6%	207 77.5%	812 33.7%
1972	359	2611	59 16.4%	1606 61.5%	270 75.2%	976 37.4%

Source: Malaysia, 1973, Ministry of Education,  
 Educational Planning and Research Division.

Note: MM: Malay-medium  
 EM: English-medium

Table 4.9

HIGHER SCHOOL CERTIFICATE EXAMINATION IN ARTS:  
 COMPARATIVE ANALYSIS OF RESULTS FOR CANDIDATES FROM  
 ASSISTED MALAY-MEDIUM AND ASSISTED ENGLISH-MEDIUM SCHOOLS

YEAR	NUMBER SAT FOR EXAM		NUMBER OBTAINED FULL CERTIFICATE		NUMBER OBTAINED STATEMENT	
	MM	EM	MM	EM	MM	EM
1967	153	1160	44 28.8%	880 75.9%	109 71.2%	280 24.1%
1968	479	1470	119 24.8%	1133 77.1%	359 74.9%	335 22.8%
1969	566	1498	150 26.5%	1046 69.8%	416 73.5%	452 30.2%
1970	794	1567	106 13.4%	945 60.3%	688 86.6%	597 38.1%
1971	762	1802	181 23.8%	1120 62.2%	580 76.1%	675 37.5%
1972	1004	2092	576 57.4%	1125 53.8%	428 42.6%	944 45.1%

Source: Malaysia, 1973, Ministry of Education,  
 Educational Planning and Research Division.

Note: MM: Malay-medium  
 EM: English-medium.

Table 4.10

PERCENTAGE DISTRIBUTION OF STUDENT ENROLLMENT IN THE  
UNIVERSITY OF MALAYA, BY ETHNIC GROUP WITHIN FACULTIES.

YEAR	ETHNIC GROUPS	ARTS	SC	ENGIN.	AGRIC.	EDU.	MEDIC.	ECONS & PUBLIC ADMIN.
1966/ 67	M	42.5	7.5	1.6	30.3	28.3	15.9	36.8
	C	39.7	81.5	90.0	61.9	46.6	73.6	54.2
	O	17.8	11.0	8.4	8.1	25.1	10.5	9.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968/ 69	M	47.8	12.8	1.8	26.2	33.0	18.6	39.0
	C	37.2	81.2	92.6	67.1	49.7	70.6	50.7
	O	15.0	6.0	5.6	6.7	17.3	10.8	10.3
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1970/	M	61.1	11.5	1.3	28.1	53.4	20.3	37.5
	C	26.6	82.0	93.1	64.2	33.3	66.1	48.8
	O	12.3	6.5	5.6	7.7	13.3	13.6	13.7
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Malaysia, Report of the Committee appointed by the National Operation Council to study Campus Life of Students of the University of Malaya, Kuala Lumpur, Government Printer, 1971, pp. 35-6.

Note : M: Malays  
C: Chinese  
O: Others

#### 4.4:2 EDUCATION DEVELOPMENT AFTER 1970

To rectify the imbalances of Malay students in higher education, especially in science and science-related subjects, under the preferential policy strategies, the government, under the Ministry of Education, has acted at the school level to provide more schools, adequate classrooms, qualified teachers, sufficient facilities and effective supervision (Malaysia, 1985).

Between 1971 and 1985, the government increased its financial allocations for the Ministry of Education in the country. During the Second Malaysia Plan (1971-1975), the allocation for the Ministry of Education was M\$5,194 million, which increased to M\$10,325 million for the Third Malaysia Plan (1976-1980), and M\$20,700 million for the Fourth Malaysia Plan (1981-1985) (see Table 4.11). Since 1971, the financial allocation for the Ministry has been almost 5.0% of the GNP, and the amount has been between 14.0% to 20.0% of the annual budget of the country for the period.



Table 4.11

## MINISTRY OF EDUCATION FINANCIAL ALLOCATION 1971-1985

MALAYSIAN FIVE YEAR PLAN	TOTAL ALLOCATION	% OF GNP	% OF ANNUAL BUDGET
SECOND (1971-1975)	5,194 m	5.9%	20.3%
THIRD (1976-1980)	10,321 m	5.7%	16.7%
FOURTH (1981-1985)	20,200 m	5.7%	14.2%

Source: Malaysia, 1986. The Ministry of Finance,  
Economic Report.

#### 4.4:3 DEVELOPMENTS IN ELEMENTARY AND SECONDARY SCHOOLS

In physical development, the Ministry spent M\$55.3 million or 9.5% of the total allocation in 1971, and in 1983, the amount was M\$869.9 million, or 22.2% (Malaysia, 1986: 186). During the third Malaysia Plan (1976-1980), out of a M\$2.58 million allocation for construction of new schools and additional classrooms in elementary schools, 86.4% was for rural areas, and 13.6% for urban, while out of M\$2.62 million for new schools and additional facilities for secondary schools, these figures were 68.8% and 31.2% for rural and urban areas, respectively (Malaysia, 1981). Between 1972-1984, elementary education experienced great development in facilities, enrollment and teachers (see Table 4.12). During 1972-1978, there was an increase of 133,620 pupils, or 14.8%, in rural schools, though the urban schools experienced a decrease of 8,064 or 1.4%. However, in 1978-1984, urban schools had 8.3% or 48,613 more pupils, and rural schools had 5.6% or 58,457 more pupils. With regard to teachers, both urban and rural schools gained increases in teaching staff, though the rural schools had an advantage. In 1978, the class-teacher ratio in urban elementary schools was 1:1.55, while in the rural schools the ratio was 1:1.06; by 1984, the ratios

reflected a better allocation for rural schools: 1:1.45 for urban, and 1:1.37 for rural (Malaysia, 1985:43).

In secondary education, as indicated in Table 4.13, significant development occurred between 1972-1984, in schools, classrooms, enrollment and teachers. Between 1978-1984, the number of new rural secondary school increased by 114 or 28.6%, compared to 42 new urban schools or 11.3%. The number of classes also increased by 3,477 or 55.5% in rural schools, while the increase was 2,187 or 29.6% in urban schools. Between 1972-1978, enrollment in rural schools increased by 90.0%, compared to 47.2% in urban schools, and between 1978-1984, both areas experienced an increase of 37.4% and 17.5%, respectively. During the periods of 1972-1978, and 1978-1984, rural schools had increased to twice the enrollment of urban schools.

Table 4.12

LOCATIONS, SCHOOLS, CLASSROOMS, ENROLLMENT  
IN ELEMENTARY SCHOOLS IN PENINSULAR MALAYSIA,  
1972, 1978, 1984.

YEAR	LOCATION	SCHOOLS	C/ROOMS	ENROL.	TEACHERS
1972	URBAN	807	9,320	594,698	17,845
	RURAL	3,534	21,283	905,702	31,598
1978	URBAN	897	9,450	586,634	21,405
	RURAL	3,534	21,526	1,039,322	35,055
1984	URBAN	852	12,302	635,247	22,211
	RURAL	3,582	28,131	1,097,779	45,713
DEVELOPMENT 1972-1978					
	URBAN	90 (11.2%)	130 (1.4%)	-8,064 (-1.4%)	3,560 (19.9%)
	RURAL	-	243 (1.1%)	133,620 (14.8%)	3,457 (10.9%)
1978-1984					
	URBAN	-45 (-5.0%)	2,852 (30.2%)	48,613 (8.3%)	806 (3.8%)
	RURAL	48 (1.3%)	6,605 (30.7%)	58,457 (5.6%)	10,658 (23.3%)

Source: Malaysia, Ministry of Education, EPRD 1986,  
Technical Report, Table 17: 42.

The establishment of new schools and classrooms in secondary education in rural areas between 1972-1984 provided broader opportunities for pupils in elementary schools in rural areas. With the expansion of enrollment in rural secondary schools, the number of teachers in these schools also increased by 6,951 or 78.3% in 1972-1978, and 8,054 or 50.9% in 1978-1984, compared to 515 or 45.1% and 6,017 or 32.7%, respectively, for urban schools. The increase in teaching staff improved the class-teacher ratio from 1:1.53 in 1978 to 1:1.65 in 1984 for rural schools and to 1.1:47 to 1:1.70 for urban schools in the same period (Malaysia, 1986, Table 20: 47).

The enrollment development in elementary education for Malays and non-Malays is shown in Table 4.14. Malay enrollment improved from 88.0% in 1970 to 96.9% in 1980, while the enrollment of non-Malays increased from 93.8% to 99.6% within this period. Overall development in elementary education for both groups improved from 1,421,532 (1970) to 1,661,333 (1980), i.e., 16.9%. For Malays the improvement was 29.9%, and for non-Malays 6.9%. This shows that the Malay enrollment increased to three times that of non-Malays within a ten year period.

Table 4.13

LOCATIONS, SCHOOLS, CLASSROOMS, ENROLLMENT AND TEACHERS IN  
SECONDARY SCHOOLS IN PENINSULAR MALAYSIA 1972, 1978, 1984

YEAR	LOCATION	SCHOOLS	C/ROOMS	ENROL.	TEACHERS
1972	URBAN	337	6,680	324,091	12,682
	RURAL	321	4,650	208,135	8,875
1978	URBAN	373	7,389	477,159	18,397
	RURAL	398	6,262	395,366	15,826
1984	URBAN	415	9,576	560,808	24,416
	RURAL	512	9,739	543,387	23,880
DEVELOPMENT 1972-1978					
	URBAN	36 (10.7%)	709 (10.6%)	153,068 (47.2%)	515 (45.1%)
	RURAL	77 (24.0%)	1,612 (34.7%)	187,231 (90.0%)	6,951 (78.3%)
1978-1984					
	URBAN	42 (11.3%)	2,186 (29.6%)	83,649 (17.5%)	6,017 (32.7%)
	RURAL	114 (28.6%)	3,477 (55.5%)	148,621 (37.4%)	8,054 (50.9%)

Source: Malaysia, Ministry of Education, EPRD, 1986:  
Technical Report, Table 19: 44).

Table 4.14  
ENROLLMENT IN ELEMENTARY SCHOOLS, PENINSULAR MALAYSIA  
1970 AND 1980

YEAR		MALAYS	NON-MALAYS	TOTAL
1970	POPULATION (6+-11+)	845,979 (54.0%)	722,281 (46.0%)	1,568,260
	ENROLLMENT	744,159 (52.3%)	677,371 (67.7%)	1,421,530
	PERCENTAGE	88.0	93.8	90.6
1980	POPULATION (6+-11+)	966,823 (57.1%)	726,626 (42.9%)	1,693,449
	ENROLLMENT	937,057 (56.4%)	724,276 (44.6%)	1,661,333
	PERCENTAGE	96.9	99.6	98.1
% DIFFERENCES 1970-1980		8.9%	5.8%	7.5%

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 22: 49.

The construction of new secondary schools and additional facilities, especially in rural areas (see Table 4.13), provided better opportunities for Malays, especially in the rural areas, to continue their education in secondary schools. Between 1970 and 1980, Malay enrollment in lower secondary schools increased by 105.7% compared to 61.3% for non-Malays (see Table 4.15). In 1970, though 357,144 Malays, or 52.2% of the population,

were between the ages of 12 to 14 years, only 50.9% were enrolled in the lower secondary schools, while the participation of non-Malays, who represented 47.8% of this age group population, was 60.1%. In 1980, the Malay enrollment percentage ratio had improved to 54.1%, while the population ratio for the age group was 56.7%. For non-Malays, the enrollment percentage ratio had increased to 43.3%, with a 45.9% population percentage ratio.

In upper secondary schools in 1970, out of 214,405 Malays or 52.0% of the population within the age group of fifteen to sixteen years old, only 43,403 or 20.2%, were enrolled in schools, while 45,997, or 23.2% of non-Malays, who made up of 48.0% of this age group population, were enrolled (see Table 4.16). In 1980, enrollment in upper secondary schools had increased to 66.5%, for Malays, and to 33.3% for non-Malays. Overall, in 1980, enrollment in the upper secondary schools represented 42.8% of the population within the age group of 15+ to 16+ years, compared to 21.7% in 1970. The enrollment ratio for Malays in 1980 had increased to 50.3%, an increase of 30.1%, compared to 20.7% in 1970, which means more Malays had enrolled in upper secondary education.



Table 4.15  
 ENROLLMENT IN LOWER SECONDARY SCHOOLS,  
 PENINSULAR MALAYSIA 1970 AND 1980

YEAR		MALAYS	NON-MALAYS	TOTAL
1970	POPULATION (12+-14+)	357,144 (52.2%)	327,149 (47.8%)	684,293
	ENROLLMENT	181,863 (48.0%)	196,732 (52.0%)	378,586
	PERCENTAGE	50.9	60.1	53.3
1980	POPULATION (12+-14+)	461,562 (56.7%)	352,261 (43.3%)	813,823
	ENROLLMENT	374,167 (54.1%)	317,363 (45.9%)	691,530
	PERCENTAGE	81.1	90.1	85.0
% DIFFERENCES 1970-1980		30.2	30.0	29.7

Source: Malaysia, Ministry of Education, 1986,  
 Technical Report, Table 24: 53.

Table 4.16

ENROLLMENT IN UPPER SECONDARY SCHOOLS  
PENINSULAR MALAYSIA - 1970 AND 1980

YEAR		MALAYS	NON-MALAYS	TOTAL
1970	POPULATION (15+-16+)	214,405 (52.0%)	197,967 (48.0%)	412,372
	ENROLLMENT	43,403 (48.5%)	45,997 (51.9%)	89,400
	PERCENTAGE	20.0	23.2	21.7
1980	POPULATION (15+-16+)	293,872 (56.6%)	225,197 (43.4%)	519,069
	ENROLLMENT	147,782 (66.5%)	74,398 (33.5%)	222,180
	PERCENTAGE	50.3	33.0	42.8
% DIFFERENCE 1970-1980		30.1	9.8	21.1

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 25:57.

Students in the upper secondary schools are streamed into science and arts classes. The composition of Malays and non-Malays who sat for the MCE examination from 1974 to 1983 is shown in Table 4.17. By 1980, Malay enrollment in arts classes had increased to 65,087, or 70.2% of the total enrollment, from 28,563, or 59.9% of the enrollment in 1970. Non-Malays also experienced an increase in

enrollment, although in their total percentage ratio, their enrollment decreased.

Table 4.17

NUMBER OF STUDENTS IN ARTS CLASSES SITTING FOR MCE  
EXAMINATION, PENINSULAR MALAYSIA 1974-1983

YEAR	MALAY	%	NON-MALAYS	%	TOTAL
1974	28,563	55.9	19,410	40.5	47,973
1977	45,914	70.3	19,253	29.7	65,267
1980	53,027	71.8	20,818	28.2	73,845
1983	65,087	70.2	27,586	29.8	92,673

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 27: 59.

In science classes, Malay students who sat for the MCE examination had increased in number from 10,384 in 1974 to 21,983 in 1983, representing 51.7% and 50.0% of the total enrollment for these respective periods (see Table 4.18).

Table 4.18

NUMBER OF STUDENTS IN SCIENCE CLASSES SITTING FOR MCE  
EXAMINATION, PENINSULAR MALAYSIA 1974-1983

YEAR	MALAY	%	NON-MALAYS	%	TOTAL
1974	10,384	50.0	10,387	50.0	20,771
1977	16,554	57.8	12,086	42.2	28,640
1980	21,410	58.4	15,280	41.6	36,690
1983	21,983	57.1	16,510	42.9	38,483

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 28: 60.

As seen in Table 4.19, the enrollment in vocational and technical schools increased for both Malays and non-Malays. In vocational schools, Malay enrollment increased from 2,950 or 64.4% of the total enrollment in 1970, to 9,933 or 84.6% in 1984, while that of non-Malays increased from 1,050 or 40.2% to 1,809 or 15.4% for the same period. In technical schools, the increase was from 613 or 40.2% in 1970 to 4,812 or 88.9% for Malays in 1984, and from 912 or 59.8% to 601 or 11.1% for non-Malays. However, Malay enrollment experienced a higher increase of 67.9% in vocational schools and 73.7% in technical schools, while that of non-Malays increased by 26.5% in vocational

schools and decreased by -20.1% in technical schools between 1970 and 1984.

In the pre-university classes, Form VI, the enrollment ratio for those within the age group of 17+ and 18+ years was small (see Table 4.20). In 1970, only 2.5% of this age group population was enrolled in the Form VI. However, in 1980, the enrollment ratio improved to 5.0%. Malay enrollment increased from 3,785 or 37.0% of the enrollment in 1970 to 14,760 or 61.2% of the enrollment in 1980. Within the period 1970-1980, the enrollment ratios for Malays and non-Malays increased by 3.4% and 1.3%, respectively.

Enrollment in science classes in Form VI increased from 5,200 in 1970 to 14,748 in 1984, an increase of 183.6% (see Table 4.21). Between 1978-1982, this enrollment decreased by 7.0%, because of the decrease in number of Malay students enrolling in science classes in 1982. The overall enrollment distribution shows that Malay enrollment in science classes was smaller - - less than 40% - - than that of non-Malays, except in 1978, when Malay enrollment was 51.3% of the total.

Table 4.19

ENROLLMENT IN VOCATIONAL AND TECHNICAL SCHOOLS  
PENINSULAR MALAYSIA 1970-1984

YEAR	MALAYS		NON-MALAYS	
	VOC.	TEC.	VOC.	TEC.
1970	1,900 (64.4%)	613 (42.2%)	1,050 (35.6%)	912 (59.8%)
1972	3,199 (70.0%)	1,105 (59.6%)	1,371 (30.0%)	750 (40.4%)
1975	6,084 (79.7%)	2,626 (71.3%)	1,545 (20.3%)	1,057 (28.7%)
1978	8,558 (84.8%)	4,126 (81.5%)	1,530 (15.2%)	935 (18.5%)
1981	9,294 (84.2%)	4,298 (82.2%)	1,738 (15.8%)	932 (17.8%)
1984	9,933 (84.6%)	4,812 (88.9%)	1,809 (15.4%)	601 (11.1%)

Source: Malaysia, Ministry of Education, 1986, Technical Report, Table 29 and Table 30: 61-63.

In Form VI Arts classes, the total enrollment increased from 5,035 in 1970 to 28,986 in 1984, an increase of 475.0% (see Table 4.22). Compared to that of non-Malays, Malay enrollment in arts classes was higher. Between 1970-1984, Malay enrollment increased from 2,581 to 22,313, an increase of almost 765.0%, while non-Malays experienced an increase of 172.0%.

Table 4.20

FORM VI ENROLLMENT RATIO  
PENINSULAR MALAYSIA 1970 AND 1980.

YEAR		MALAYS	NON-MALAYS	TOTAL
1970	POPULATION 17+ - 18+	195,679 (52.4%)	178,004 (47.6%)	373,683
	FORM VI ENROLLMENT	3,785 (37.0%)	6,454 (63.0%)	10,235
	ENROLLMENT RATIO	1.9%	3.2%	2.5%
1980	POPULATION 17+ - 18+	277,276 (57.0%)	209,506 (43.0%)	486,782
	FORM VI ENROLLMENT	14,760 (61.2%)	9,349 (38.8%)	24,109
	ENROLLMENT RATIO	5.3%	4.5%	5.0%
ENROLLMENT RATIO 1970-1980		3.4%	1.3%	2.5%

Source: Malaysia, Ministry of Education, EPRD, 1986,  
Technical Report, Table 31: 65.

Table 4.21  
 FORM VI ENROLLMENT IN SCIENCE CLASSES,  
 PENINSULAR MALAYSIA 1970-1984

YEAR	MALAYS	%	NON-MALAYS	%	TOTAL
1970	1,204	(23.2)	3,996	(76.8)	5,200
1974	2,909	(39.4)	4,468	(60.6)	7,377
1978	5,806	(51.3)	5,515	(48.7)	11,321
1982	3,271	(31.1)	7,252	(68.9)	10,523
1984	3,302	(22.4)	11,446	(77.6)	14,748
DEVELOPMENT PERCENTAGES					
1970-1974		141.6%		11.8%	41.9%
1974-1978		99.6%		23.4%	53.5%
1978-1982		-43.7%		31.5%	-7.0%
1982-1984		1.0%		57.8%	40.2%

Source: Malaysia, Ministry of Education, EPRD, 1986,  
 Technical Report, Table 32: 67.



Table 4.22  
 FORM VI ENROLLMENT IN ARTS CLASSES,  
 PENINSULAR MALAYSIA 1970-1984

YEAR	MALAYS	%	NON-MALAYS	%	TOTAL
1970	2,581	(51.3)	2,454	(48.7)	5,035
1974	4,264	(65.5)	2,248	(34.5)	6,512
1978	8,396	(71.4)	3,371	(26.6)	11,767
1982	15,445	(75.0)	5,148	(25.0)	20,593
1984	22,313	(77.0)	6,673	(23.0)	28,986
DEVELOPMENT PERCENTAGES					
1970-1974		65.2%		-8.4%	29.3%
1974-1978		96.9%		49.9%	80.7%
1978-1982		84.0%		52.7%	75.0%
1982-1984		44.5%		29.6%	40.8%

Source: Malaysia, Ministry of Education, EPRD, 1986,  
 Technical Report, Table 33: 69.

#### 4.4:4 RESIDENTIAL SCHOOLS

The paucity of Malay students in science classes, low academic achievement in public examinations at MCE and HSC, and positive correlation between poverty and poor educational performance in the rural areas (Malaysia, 1977) led the government to establish residential secondary schools for Malays in 1971. The main objective of these schools was to provide wider opportunities for Malay students, especially in rural areas, to live and learn in better equipped schools and environments (Malaysia, 1986: 91). According to the report by the Residential School Unit, School Division, Ministry of Education, February 14, 1978, other objectives of establishing residential schools were:

- i) To increase Malay students in science and science related subjects.
- ii) To provide leadership training.

Students enrolled in these schools are selected by the Residential School Unit, Ministry of Education, based on the following criteria:

- i) Student background:
  - a. Academic excellence in Grade V public elementary education examination, conducted by the Ministry of Education, and
  - b. Parental socioeconomic status, based on annual income and number of dependents.

- ii) Category of schools:
  - a. annual enrollment
  - b. location of schools - rural or urban, and
  - c. performance of the school in the Grade V examination during the last three years (Malaysia, 1986, Ministry of Education: 92).

Since 1980, Malay students who have achieved excellent performance in LCE examination in day-schools have been selected to Form IV in residential schools (Malaysia, 1986: 92).

In 1984, there were 27 residential schools in Peninsular Malaysia, with an enrollment of 12,115. During 1971-1984, a period of 14 years, the enrollment in Form I had increased from 310 to 2,248, with an annual increase of 22.0% (see Table 4.23). The representation of rural Malays within the period was more than 60.0% greater than the annual enrollment of urban Malays, except in 1972, when Malay pupils from urban areas exceeded those from rural areas by 11.0%. Overall, the annual percentage ratio increase of rural Malay pupils between 1971-1984 was 28.0%, and of urban Malays, 2.4%.

Another type of residential school, the MARA Junior Science College (MJSC), was established by the Division of Education and Training, the Council of People's Trust (MARA). The MJSC was first established in 1972, and in 1984 there were ten of these schools, with 6,311 students. The main objective of these colleges was to provide post-

elementary education in science and science related subjects to Malay students from rural areas and low socioeconomic families (Malaysia, 1986: 104). Students who obtained a minimum of 2A, 2B and 1C in five related subjects in the Grade V assessment examination, with a minimum grade of B in science and mathematics, could apply for admission to Form I in these colleges (Malaysia, 1986: 104). Those students who were qualified sat for qualifying entrance test, which carried a weight of 85.0% in the admissions decision; the other 15.0% is assigned to the socioeconomic status of the family (Malaysia, 1986: 104).

As seen in Table 4.25, admissions to Form I in MJSC increased from 150 in 1970 to 1,474 in 1984. The average annual percentage increase was 26.0%. Since greater weight - - 85.0% - - was allocated to the final qualifying entrance test, this gave an advantage to pupils from better equipped urban schools in developed states over those from less developed states. As indicated in Table 4.25, more than 60.0% of Malay pupils in MJSC in Form I in 1980 and 1982 were from developed states, and in 1984, the percentage was still high - - 54.0%, compared to those from less developed states. However, the Table also reflects a steady increase in Malay students from less

developed states from 1980 to 1984, from 37.5% to 46.0% of the total enrollment.

Table 4.23  
FORM ONE ENROLLMENT IN RESIDENTIAL SCHOOLS,  
PENINSULAR MALAYSIA 1971-1984

YEAR	URBAN	%	RURAL	%	TOTAL
1971	112	36.1	198	63.9	310
1972	296	55.6	234	44.2	530
1973	461	34.2	887	65.8	1348
1974	472	38.5	754	61.5	1226
1975	444	30.4	1017	69.6	1461
1976	620	38.4	996	61.6	1616
1977	560	35.6	1012	64.4	1572
1978	532	33.3	1066	66.7	1598
1979	585	36.9	999	63.1	1584
1980	586	35.5	1021	63.5	1607
1981	594	37.6	986	62.4	1580
1982	1089	46.4	1258	53.6	2347
1983	974	46.6	1118	53.4	2092
1984	817	36.7	1431	63.7	2248

Source: Malaysia, Ministry of Education, Residential School Unit, 1984.

Note: Urban areas are defined as areas with population of 10,000 or more. Rural areas are those with less than 10,000 population.

Table 4.24

FORM ONE ENROLLMENT AT THE  
MARA JUNIOR SCIENCE COLLEGE, MALAYSIA, 1974-1984

YEAR	ENROLLMENT
1972	150
1974	378
1976	313
1978	611
1980	1098
1984	1474

Source: Malaysia, Ministry of Education, EPRD, 1986, Technical Report, Table 62: 106, cited from MARA Secondary Education Division, 1984.

Table 4.25  
FORM ONE ENROLLMENT IN  
MARA JUNIOR SCIENCE COLLEGE ACCORDING TO STATES.

	1980	1982	1984
<b>DEVELOPED STATES</b>			
JOHOR	153	198	152
MELAKA	43	46	60
NEGERI SEMBILAN	112	41	65
SELANGOR	121	120	217
FEDERAL TERRITORY	71	62	85
PERAK	143	142	160
PULAU PINANG	44	32	57
<b>TOTAL</b>	<b>687</b>	<b>641</b>	<b>796</b>
<b>PERCENTAGE</b>	<b>(62.5)</b>	<b>(60.0)</b>	<b>(54.0)</b>
<b>LESS DEVELOPED STATES</b>			
KEDAH	61	68	77
PERLIS	17	13	32
KELANTAN	126	127	236
TRENGGANU	135	155	211
PAHANG	60	132	87
SABAH	6	1	13
SARAWAK	6	8	19
<b>TOTAL</b>	<b>411</b>	<b>504</b>	<b>678</b>
<b>PERCENTAGE</b>	<b>(37.5)</b>	<b>(40.0)</b>	<b>(46.0)</b>

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 62: 106, cited from  
MARA Secondary Education Division, 1984.

#### 4.4:5 ACADEMIC PERFORMANCE

Academic achievement in public educational examinations is often regarded as a major step in the competition for obtaining credentials at subsequent levels of education. In this section, four major public examinations - - the Standard V Assessment, the Lower Certificate of Education (LCE), the Malaysian Certificate of Education (MCE), and the Higher School Certificate (HSC) - - will be discussed. The main focus of the discussion will be the differences in academic achievement between Malay and non-Malay students (Chinese and Indians).

The academic performance in Standard V Assessment 1976-1983 between Malays and non-Malays (Table 4.26) reflects two different characteristics. One is that Malays performed better in Malay language, science and history/geography. The other is that non-Malays showed better performance in English language and mathematics. When the students' performance in the Standard V Assessment is tabulated according to urban and rural, as in Table 4.27, students from urban schools performed better in English language, mathematics, science and history/geography. In Malay language, students in rural areas achieved better results. However, there is a strong



indication that students' performances in mathematics and science in rural schools improved. In addition, overall Malay students' achievements in mathematics and science showed improvement, which would provide not only more Malays eligible to be enrolled in residential schools and secondary schools, but also better qualified Malay students in science and mathematics classes.

In the Lower Certificate of Education (LCE) examination, the Malay students' overall performance between 1977 to 1983 showed greater improvement, from 57.5% in 1977 to 67.8% in 1983, while that of non-Malay improved from 55.4% to 59.4% within the same period (see Table 4.28). In earning a grade of A, non-Malay students fared better in percentage than Malay students, except in 1983, though there were more Malays in absolute numbers. However, in academic performance in mathematics and science (see Table 4.29), non-Malays performed better than Malays. Comparing rural and urban schools in overall performance in the LCE in 1977-1983, the urban students had a higher percentage of A grades than did rural students (see Table 4.30).

Table 4.26

STANDARD V ASSESSMENT PERCENTAGES OF PASSES (GRADES A,B,C)  
 ACCORDING TO SUBJECTS AND ETHNIC GROUPS 1976-1983

YEAR		MALAY LANG.	ENGLISH LANG.	MATH.	SCIENCE	HISTORY /GEOG.
1976	M	77.0	47.8	44.4	68.9	69.7
	NM	24.2	67.5	60.9	58.9	59.2
1977	M	71.9	24.6	58.4	70.2	72.7
	NM	21.8	53.3	69.7	64.2	61.8
1978	M	78.1	34.7	47.7	62.5	72.1
	NM	30.2	65.9	65.5	60.5	69.8
1979	M	77.6	36.7	56.4	69.8	74.4
	NM	30.2	69.4	70.8	63.9	67.1
1980	M	79.6	41.1	59.3	72.5	71.0
	NM	29.6	71.5	70.3	68.1	58.8
1981	M	82.7	51.3	56.0	75.6	77.0
	NM	35.1	75.5	72.3	67.4	66.4
1982	M	82.1	46.3	59.4	80.7	74.9
	NM	31.9	73.8	72.7	68.6	65.5
1983	M	81.1	47.2	60.0	75.1	75.6
	NM	31.4	71.4	74.5	67.4	66.6

Source: Malaysia, Ministry of Education, 1986,  
 Technical Report, Table 1: 17.

Note: M: Malays. NM: Non-Malays

Table 4.27

STANDARD V ASSESSMENT PERCENTAGES OF PASSES (GRADES A,B,C)  
IN VARIOUS SUBJECTS ACCORDING TO LOCATION 1976-1983.

YEAR		MALAY LANG.	ENGLISH LANG.	MATH.	SCIENCE	HISTORY /GEOG.
1976	U	51.1	63.9	63.2	66.9	69.1
	R	54.4	46.6	44.3	62.4	62.2
1979	U	55.9	63.6	72.3	70.9	75.1
	R	57.9	31.2	56.8	65.1	68.9
1981	U	60.3	72.8	73.2	75.4	75.7
	R	63.0	46.4	56.9	70.0	70.3
1983	U	57.7	67.5	75.5	74.7	75.5
	R	61.0	62.6	60.4	70.0	47.2

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 2: 19.

Note: U: Urban. R: Rural.

Table 4.28

LOWER CERTIFICATE OF EDUCATION (LCE)  
EXAMINATION RESULTS, PENINSULAR MALAYSIA 1977-1983

YEAR	PASSES (GRADES A, B, C)		GRADE A	
	M	NM	M	NM
1977	57.5% (63,092)	55.4% (32,650)	48.3% (52,957)	49.2% (29,003)
1979	59.1% (56,728)	58.1% (38,287)	46.8% (44,911)	49.5% (32,650)
1981	64.7% (81,896)	59.4% (43,341)	49.2% (62,322)	50.6% (36,907)
1983	67.8% (90,379)	59.4% (46,362)	54.9% (73,178)	53.4% (41,669)

Source: Malaysia, Ministry of Education, 1986, Technical Report, Table 4: 23, cited from Examination Council, 1985.

Note: a. An aggregate point 1 (excellent) to 9 (fail) is given to each subject.

b. Grade A for LCE is awarded to student whose total aggregate points are 34 or less from the total of 5 best subjects, including Malay language, mathematics, and either history or geography.

c. M: Malays. NM: Non-Malays

Table 4.35

THE MALAYSIAN CERTIFICATE OF EDUCATION IN SCIENCE STREAM  
AT RESIDENTIAL SCHOOLS, PENINSULAR MALAYSIA 1974-1983

YEAR	GRADE PASSES						FAIL		TOTAL
	I	%	II	%	III	%		%	
1974	882	71.4	288	23.3	62	5.0	3	0.2	1235
1976	973	69.8	347	24.9	61	4.4	13	0.9	1394
1978	866	60.0	417	28.9	122	8.4	39	2.7	1444
1980	1184	69.3	397	23.2	105	6.1	22	3.0	1708
1982	1269	69.0	459	25.0	99	5.4	12	0.6	1939
1983	1254	78.2	288	18.0	57	3.5	5	0.3	1604

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 56: 98, cited from  
Residential School Unit.

Table 4.36

THE MALAYSIAN CERTIFICATE OF EDUCATION IN ARTS STREAM  
AT RESIDENTIAL SCHOOLS, PENINSULAR MALAYSIA 1974-1983.

YEAR	GRADE PASSES						FAIL	TOTAL
	I	%	II	%	III	%		
1974	70	68.6	19	18.6	13	12.8	-	102
1976	14	58.3	9	37.5	1	4.2	-	24
1978	16	88.9	2	11.1	-		-	18
1980	12	66.7	3	16.7	3	16.7	-	18
1982	13	52.0	11	44.0	1	1.0	-	25
1983	58	86.6	8	11.9	1	1.5	-	67

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 57 and 58: 99-100,  
cited from Residential School Unit.

Table 4.37

THE MALAYSIAN CERTIFICATE OF EDUCATION  
AT THE MARA JUNIOR SCIENCE COLLEGE 1974-1983.

YEAR	GRADE PASSES		GRADE PASSES		GRADE PASSES		FAIL		TOTAL
	I	%	II	%	III	%		%	
1976	109	73.6	30	20.3	9	6.1	-		148
1978	305	84.5	44	12.2	10	2.8	2	0.6	361
1980	323	75.3	69	22.4	7	2.3	-		308
1982	417	68.4	155	25.4	37	6.1	1	0.2	610
1983	644	72.5	195	22.0	44	5.0	5	0.6	888

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 64 and 65: 109-110,  
cited from MARA Secondary Educational Division.

In the Higher School Certificate (HSC) examination, as indicated in Table 4.38, non-Malays had better performance than Malays in science and arts streams during 1975 to 1981. Between science and arts, Malay students performed better in arts, with an average of 35.4% in arts, compared to 5.9% in science. In residential schools, percentages of students who gained the full certificate were better in arts than in science (Table 4.39). From 1975 to 1983, there was an annual average of 63.9% of full

certificate arts students, while in science the average was 19.8%.

The poor performance of Malay students in the HSC was due to the selection of the best Malay students for matriculation classes and overseas institutions after MCE. For example, in 1980, there were 39,908 Malaysian students studying in overseas institutions, out of which Malays accounted for 23.0% or 9,175 (Malaysia, 1981: 350). In matriculation classes, the intakes for 1982 and 1983 were 1,078 and 1,001 of those students who had good grades in science and mathematics in MCE (Malaysia, 1986: 133).



Table 4.38

FULL CERTIFICATE AWARDED IN THE HIGHER SCHOOL CERTIFICATE  
(HSC) EXAMINATION, PENINSULAR MALAYSIA, ACCORDING TO  
ETHNIC GROUPS AND ACADEMIC STREAMS 1975-1981.

YEAR	SCIENCE			ARTS		
	M	NM	DIFF.	M	NM	DIFF.
1975	10.3	82.3	-72.0	44.1	80.0	-35.9
1976	8.5	85.7	-77.2	40.4	73.6	-33.2
1977	6.9	80.9	-74.0	27.8	74.1	-46.3
1978	4.5	77.9	-73.4	25.2	61.0	-35.8
1979	4.8	74.7	-69.9	36.1	55.2	-19.1
1980	4.4	73.7	-69.3	34.2	59.2	-25.0
1981	2.0	71.0	-69.0	39.9	61.9	-22.0

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 15: 37, cited from  
Examination Council.

- Note:
- a. Full certificate is awarded to students who achieve Principal level (A to D) in two subjects, two Subsidiary levels in other subjects, and Pass level in General Paper.
  - b. M: Malays. NM: Non-Malays.

Table 4.39

HIGHER SCHOOL CERTIFICATE RESULTS AT RESIDENTIAL SCHOOLS,  
PENINSULAR MALAYSIA 1975-1983.

YEAR	SCIENCE					ARTS				
	FULL CERT.	%	PARTIAL CERT.	%	TOTAL	FULL CERT	%	PARTIAL CERT.	%	TOTAL
1975	19	15.3	105	84.7	124	76	61.8	47	38.2	123
1976	26	19.0	111	81.0	137	62	37.3	104	62.7	166
1977	29	14.7	168	85.3	197	68	52.3	62	47.7	130
1978	26	22.6	89	77.4	115	66	56.9	50	43.1	116
1979	15	8.1	171	91.9	186	62	51.7	58	48.3	120
1980	8	3.5	223	96.5	231	94	73.4	34	26.6	128
1981	2	1.7	118	98.3	120	70	60.9	45	39.1	115
1982	7	21.2	26	78.8	33	47	82.5	10	17.5	57
1983	83	71.7	24	28.3	120	128	98.5	2	1.5	130

Source: Malaysia, Ministry of Education, 1986,  
Technical Report, Table 59: 101, cited from  
Residential School Unit.

The one fact that had been of great concern to the policy planners and implementers of special Malay Rights was the wide gap that existed between Malays and non-Malays in educational opportunities at the tertiary level. Since acquisition of tertiary education determines the access the respective communities have in higher levels of employment in the technical and professional fields, an earnest effort was made to increase the opportunities of Malays in tertiary education, at both post-secondary and

degree levels. Considering that to increase the enrollment of Malays at the tertiary level, their participation and performance had to be at primary, secondary and post-secondary levels, as discussed, what was achieved from the 1970s to 1980s can be deemed remarkable.

#### 4.4:5 ACCESS TO HIGHER EDUCATION

Like other developing countries, Malaysia recognizes that rapid economic growth is imperative if its nation-building process is to succeed. Consequently, it drew up development plans which stressed social and economic development and the importance of generally raising living standards (Malaysia, 1971, 1976, 1981). However, in the formulation and implementation of these plans, one common problem which arose consistently was the shortage of necessary skilled manpower, particularly with technical and managerial expertise. Hence, the problem of being able to produce adequate graduate manpower was serious and urgent, particularly in the period before 1969, when Malaysia had only one university. The problem was further aggravated by the fact that in the early years after independence in 1957, the educational preoccupation of the country was focused on the primary and secondary levels. This was clearly reflected in the work of the 1956

Education Committee, and of the Education Review Committee of 1960, neither of which paid any attention to tertiary education. It was not until September 1962 that a Cabinet Committee, called the Higher Education Planning Committee (Malaysia, 1967), under the chairmanship of the Minister of Education, was set up. Its mission was "to review the arrangements ... for higher education and to make recommendations for the development and improvement of such education in the light of the foreseeable needs and financial resources of the country." The work of this committee was oriented primarily toward the role of institutions of tertiary education in producing the kind of trained manpower that was necessary for the attainment of the economic and social goals of the country. The findings of the Committee indicated a serious shortage of qualified manpower at the professional and sub-professional levels. Specifically, it was noted that the need for graduates in science, engineering, medicine, accountancy, statistics and other professions which involved technical training was particularly acute.

The need to gear the development of university education to the immediate needs of the nation was therefore uppermost in the deliberations of the Committee.

For example, two specific recommendations of the Committee reflected this preoccupation.

First, since rural development formed an important part of the national development programs, the Committee saw the need to pay special attention to agricultural sciences. The provision of courses in agriculture, fisheries, forestry and veterinary sciences was seen as a priority. This was particularly so since the only university, the University of Malaya, was at that time producing only twenty agricultural graduates a year, which was far from being adequate to meet actual needs. In the area of fisheries, there were no facilities for the study of marine fisheries, although Malaysia, with a three-thousand-mile coastline, had good potential for developing the fishing industry. The possibility of ocean fishing was also good, since Malaysia stands at the gateway to the rich tuna fishing resources of the Indian Ocean. Therefore, the need to provide the necessary training to exploit some of these rich resources for home consumption and export was important. This would not only add greatly to the national income, but would also help to diversify the economy, which was an important objective of the national plan. In addition, there were no special training facilities at the university level for the large-

scale development of inland fisheries, an area of particular significance, since fish is a major source of protein in rural areas. In the field of forestry, the rapid development of this industry had created a need for professionally trained personnel in forest management, research and training. Likewise in veterinary science, since livestock production had become a highly specialized and commercialized industry, the demand for veterinary scientists was apparent.

The second example of the Committee's concern to relate university education to national needs was in the area of technological education. Here, all research indicated a severe shortage of professional engineers and technologists, and the situation was likely to get worse unless immediate steps were taken to meet the growing demand. In light of this, the Committee recommended that the existing Technical College, which provided only diploma-level courses, be upgraded to a College of Technology with a status comparable to that of a university. In this way, university-level courses in engineering, architecture, planning, surveying and valuation could be offered.

Very largely because of the recommendations of this Committee, Malaysia saw a period of rapid development in

the establishment of new universities. At the same time, it was also recognized that the development of universities in Malaysia had to take into account the type of education that would contribute most to the achievement of long-term socioeconomic objectives. In the case of Malaysia, the economy which had so long been geared toward primary products now saw the need to transform the system and determine new priorities. Moreover, the new direction gave the highest priority to the development of the industrial and agricultural sectors of the economy. In consequence, changes in the education system had to follow. In the industrial sector the greatest need was for technological education; and in the agricultural sector, manpower with a scientific background and specialized training was required. In light of the identification of the importance of science and technology in the development of both human and natural resources, it was also decided that the ratio of graduates in science and technology to those in arts should be in the proportion of 60 to 40 (Sharom, 1980:727). Although the universities had tried to meet this target, its achievement has yet to materialize. Indeed, the output at degree level is still biased towards the arts. For instance, during the 1976-78 period, out of a total of 11,159 new degree holders, 61.0%

were in the arts, and only 39.0% in science, including 7.0% in technological courses (Malaysia, 1981). In 1981, the intake for arts courses was 52.0%, and for science, 48.0%, while in 1985, these figures were 58.3% and 41.7%, respectively (Malaysia, 1986-1990, 1986: 547). This imbalance manifests itself in the continuing shortage of scientific and technical manpower. There is, therefore, a need to shift the emphasis in course structure at universities so that the 60:40 ratio will be met soon.

Having agreed that a fundamental objective of university education in Malaysia was the orientation and expansion of its programs towards meeting the manpower needs of the nation, the country had to address a crucial issue: the question of access. What proportion of candidates should be permitted to proceed to university education? For Malaysia this problem is not only complicated, but also very sensitive, because it has to be addressed against the background of the national policy to restructure society as enunciated in the New Economic Policy (NEP). It is for this reason that the Formula Approach adopted by the Higher Education Committee, which related higher education requirements as a proportion of the total educated population of the country, was not a realistic one (Malaysia, 1967: 197-199, 202). Through this



Formula Approach the Committee recommended that as a principle for long-term planning, personnel in the professional, sub-professional and general categories should be in the ratio of 1:4:20. Based on this ratio, it was also recommended that 16.0% of the relevant age group be provided opportunities for college education, and that university education should absorb 4.0% (Malaysia, 1967). In recommending this particular approach, the Committee did not take into account the need to greatly increase the share of places for Malays and other indigenous peoples in order to redress past imbalances. Yet this is a particularly important objective if universities are to assist in the eradication of ethnic or racial identification with economic functions, as indicated in the NEP (Malaysia, 1971).

Under normal circumstances, when considering higher education policies the main concern is that of how to produce enough graduates to develop the human and natural resources of the nation to best advantage. In this context, the most difficult task is to find the money to pay for universities; once it is found, other issues can be addressed with relative ease (Sharom, 1980: 728). Yet in multi-ethnic Malaysia, higher education, like other areas, is bedeviled by ethnic considerations. The

government is therefore unable to leave the issue of accessibility in the hands of the universities which may wish to admit only the best academically qualified students. In Malaysia, an admission policy which is based solely on academic merit will result in the exclusion of many Malays from universities, and this will have adverse effects on the efforts to promote national unity (Malaysia, The Majid Report, 1971). For instance, in the 1965/66 academic year, Malay enrollment at the University of Malaya was only 25.4%, while Chinese comprised 58.9% and Indians 13.9% (Malaysia, The Majid Report, 1971). The probability of access for Malays was 2 in 1,000, 6 for Indians and 8 for Chinese (Sharom, 1980: 740).

Against the above situation, the universities are committed to providing wider opportunities through a preferential policy to the Malays and other indigenous peoples for higher education. Through proper training at university level, Malays will then be able to participate in the professions and at higher levels of employment, thus minimizing problems arising out of identification of race with economic functions. The implementation of this policy is, however, still a difficult matter, because of two complications. In the first place, there are more university students enrolled in the arts than in science.

Second, within this general imbalance, the proportion of students of Malay origin enrolled in science is far less than those of non-Malay origin. In the 1976/77 academic session, the enrollment data at the University of Malaya, the Science University and the National University showed that Malay students contributed 77.2% of the total in arts degree courses (Sharom, 1980: 720), which is not much different from figures on the total output of graduates from the period 1960-1970, in which Malays constituted 40.5% in arts, 34.2% in economics, 26.2% in education, 9.3% in medicine, 18.0% in agriculture, 4.04% in science and 0.9% in engineering (Sharom, 1980: 729; The Majid Report, 1972). Thus the universities not only have to respond to national economic and social plans which call for more manpower with a scientific and technological background, but they also have to ensure that they play their part in restructuring the occupational composition of the economy by providing greater representation in industry and commerce to Malays. The problem of being able to obtain enough Malay candidates of quality to enter into scientific and technological courses has yet to be solved by improvement of the school system, so that Malay students get the proper scientific background and education, and are able to compete on a par with others.

While this is being done (as discussed earlier in the chapter), transitional steps are also necessary in order to prevent the problem from getting worse (Sharom, 1980: 729). The universities have therefore implemented two main methods of increasing Malay intake in both quantitative and qualitative terms. The University of Agriculture and the University of Technology have systems of admitting students with MCE levels ("O" Levels) into their Diploma Courses, and those who perform well in these courses are then transferred to degree-level courses. The other three universities, the University of Malaya, the Science University and the National University, have introduced various Matriculation Science Programs which admit Malay students with MCE ("O" Levels) who on successful completion, are eligible to read undergraduate courses in science and technology.

The Matriculation Program is a two-year course. During the first year, students at the National University and the Science University are attached to eleven selected residential schools, and in the second year, students are fully attached to their respective universities. Students in the University of Malaya's program are attached to the university for both years. When this program was established in 1970, there were 183 students; the number

increased to 1,001 in 1983, an increase of 69.0% (see Table 4.40).

Table 4.40  
MATRICULATION PROGRAM, PENINSULAR MALAYSIA 1970-1983

YEAR	NO. OF STUDENTS
1970	183
1975	448
1980	913
1982	1,078
1983	1,001

Source: Malaysia, Ministry of Education, 1986: 133.

Under the provisions of the Constitutional Amendment Act of 1971, the Universities and University Colleges Act of 1971, the universities and other tertiary institutions within the country were required to admit more Malay and other indigenous people to "bring enrollment figures roughly aligned with the population ratio of the country" (Malaysia, 1971). Places in tertiary education are "ratioed" at 60:40 for Malays and other indigenous people and non-Malays, which include Chinese, Indians and others. In order to coordinate the administration and

implementation of the requirements of the constitutional provision effectively, the government established, in 1971, a Central University Admission Unit (Unit Pusat Universiti) within the Ministry of Education to ensure that admissions into the universities were in line with the NEP. Students who have a minimum of two grade E - the minimum grade at the principal level - and have passed the General Paper are eligible to apply for admission to the Unit. Students are asked to indicate three orders of preferences for university and field of study. Each grade for the subjects in the HSC is given points, and is listed according to merit (total points) against these preferences (see Table 4.41).

Table 4.41  
ADMISSION GRADING POINTS FOR HSC

SUBJECT GRADE	POINT ASSIGNED
A	16
B	14
C	12
D	10
E	8
R (SUBSID.)	5
F	0

Source: Malaysia, Ministry of Education, 1986,  
Higher Education Unit.

Selection of students into each university is done by an Inter-University Admission Committee, represented by representatives of universities. Besides the total points of applicants, representatives of each university are guided by the courses applied for, proficiency in Malay and English language, and the number of places allocated for each field of study. Though the general guide line for admission to each university is by the "population proportion," in certain fields of study, such as medicine and engineering, intake of Malay students is often more than the prescribed quotas. Furthermore, the admission of Malay students from the Matriculation Program is done

directly by each university, without going through the Central University Admission Unit. In the 1983/84 academic session, besides 4,344 Malays out of 7,499 total students admitted by the Central University Admission Unit, there were 1,804 Malay students admitted directly from Matriculation Programs (Malaysia, 1984, Ministry of Education, Higher Education Unit).

As shown in Table 4.42, taking university enrollment alone as a measure of the increase in tertiary education, the total enrollment increased from 3,525 in 1967 to 33,741 in 1985, an increase of 857.0%. Within this increase, the Malay enrollment increased from 1,038 (or 29.4%) of the total enrollment, to 21,915 (or 85.0%), an increase of 2,011.3%, which was a tremendous achievement by any measure. In comparison, the Chinese enrollment increased by 348.8%, and those of Indians and others by 634.7% and 126.6%, respectively.

The efforts to raise Malay participation in tertiary education through preferential policy since 1970 have resulted in a respectable level of representation as a whole. Within fifteen years, from 1970 to 1985, Malay enrollment increased by 610.6%, or an annual average of 40.7%, compared to the total annual enrollment increase of 22.6%. Of all Malaysians enrolled in tertiary education,



Malay representation increased from 29.4% in 1967 to 40.2% in 1970, 57.3% in 1975, 66.2% in 1980 and 65.0% in 1985. If we accept that the ultimate objective of the NEP and the recommendation of the Majid Report is to bring these enrollment figures in line with the population percentages in the country, the objective has been achieved, although the percentages significantly favor the Malays, who constitute 55.0% of the population. Although the percentage of participation for Chinese and Indians declined considerably over the years, the actual number of students for all ethnic groups has increased continuously. From 1970 to 1985, the increase for Malays has been from 3,084 to 21,915; for the Chinese, from 3,752 to 9,128; and for the Indians, from 559 to 2,417.

It is quite obvious that the government exercises control over the admissions to tertiary institutions so that the overall enrollment picture is roughly aligned with the population ratio of the country. As seen in Table 4.43 Malay students were admitted in greater percentages, from 55.3% (2,812) in 1971 to 71.3% (9,663) in 1983, an increase of 234.6% over the period. The non-Malays, though they experienced a decline in admission percentage, from 44.7% in 1971 to 28.7% in 1985, in absolute number they gained by 1,113, or 71.0%. As the intake of Malays into each

university increased, the pattern of student bodies in the enrollment also changed. In 1970, the non-Malays were highly represented at the University of Malaya (60.9%) and the University of Science (71.0%), but represented a very small number at the National University (2.8%) (see Table 4.44). By 1980, Malay students constituted larger percentages in all universities.

Table 4.42  
 ETHNIC ENROLLMENT FIGURES AT UNIVERSITIES  
 IN PENINSULAR MALAYSIA 1967-1985

YEAR	MALAYS	CHINESE	INDIANS	OTHERS	TOTAL
1967	1,038 29.4%	2,034 57.7%	329 9.3%	124 3.5%	3,525
1970	3,084 40.2%	3,752 48.9%	559 7.3%	282 3.7%	7,677
1975	8,600 57.3%	5,375 35.8%	846 5.6%	189 1.3%	15,010
1980	12,879 66.2%	5,162 26.5%	1,193 6.1%	234 1.2%	19,468
1985	21,915 65.0%	9,128 27.1%	2,417 7.2%	281 0.8%	33,741
PERCENTAGE INCREASE					
1967-70	197.1%	84.6%	69.9%	52.4%	325.8%
1970-85	610.6%	143.3%	332.4%	-0.4%	339.5%
1967-85	2011.3%	348.8%	634.7%	126.6%	857.2%

Source: Malaysia, The Third Malaysia Plan, 1975-1980;  
 The Fourth Malaysia Plan, 1981-1985, Table 21-3;  
 and The Fifth Malaysia Plan, 1986-1990, Table 19-3.

Table 4.43

ADMISSION AT THE UNIVERSITIES,  
ACADEMIC SESSIONS 1971/72 - 1983/84.

YEAR	ETHNIC	UM	USM	NUM	AUM	TUM	TOTAL	%
1971	M	1567	193	378	387	287	2812	55.3
	NM	1764	326	17	69	94	2271	44.7
1975	M	1500	751	1289	1104	798	5442	71.9
	NM	1371	448	94	130	82	2125	28.1
1980	M	1901	866	2066	1194	1110	7137	71.5
	NM	1532	532	429	204	145	2842	28.5
1983	M	2042	1495	2775	1896	1455	9663	71.3
	NM	1506	831	777	497	273	3884	28.7
PERCENTAGE INCREASE 1971-1985								
	M	30.3	675.6	634.1	390.4	407.0	234.6	
	NM	-14.6	154.9	4470.6	620.3	190.4	71.0	

Source: Malaysia, Ministry of Education, 1986, Technical Report, Table 106: 194, cited from Higher Education Division.

## Note:

- M: Malays.
- NM: Non-Malays.
- UM: University of Malaya, Malaysia.
- USM: University of Science, Malaysia.
- NUM: National University of Malaysia.
- AUM: Agricultural University of Malaysia.
- TUM: University of Technology, Malaysia.

Table 4.44  
ENROLLMENT AT UNIVERSITIES ACCORDING TO ETHNIC GROUPS  
1970-1985

ETHNIC		1970	1980	1985
UM	M	2843 (39.1%)	4603 (57.2%)	5041 (53.7%)
	NM	4424 (60.9%)	3442 (42.8%)	4341 (46.3%)
USM	M	67 (29.0%)	1612 (55.6%)	3996 (55.5%)
	NM	164 (71.0%)	1285 (44.4%)	3211 (44.5%)
NUM	M	174 (97.2%)	4896 (85.5%)	6454 (72.5%)
	NM	5 (2.8%)	830 (14.5%)	2446 (27.5%)
AUM	M	-	1431 (81.7%)	3652 (80.7%)
	NM	-	321 (12.3%)	873 (19.3%)
TUM	M	-	877 (83.8%)	2284 (75.4%)
	NM	-	170 (16.2%)	750 (24.6%)
UUM	M	-	-	488 (70.1%)
	NM	-	-	208 (29.9%)

Source: Malaysia, Fourth Malaysia Plan, 1981, Table 21-3;  
Fifth Malaysia Plan, 1986, Table 19-3.

Note: M: Malays. NM: Non-Malays  
UUM: University of Northern Malaysia.

It can be noted that in spite of the tremendous achievement in increasing educational opportunities in degree level education locally, over one-third of all Malaysian students still have to seek overseas places for degree level education. The key factor here is the number of students enrolled in foreign institutions and their

ethnic breakdown. The final balance in educational opportunities was achieved largely by the respective non-Malay communities. In fact, government action had been aimed almost entirely at improving Malay enrollment in tertiary education overall by increasing their enrollment to 63.0% in 1985, at local institutions. In this regard, we see in Table 4.45 that Malay percentages of enrollment at both local and foreign institutions were below the proportion of population percentages in the country, as prescribed in the objective of the preferential policy. Of the total number of students enrolled in degree courses, the Malays constituted 45.4% and 49.4%, the Chinese 44.3% and 40.7%, the Indians 9.5% and 9.2% in 1980 and 1985, respectively. Thus both the Chinese and the Indians attained better percentages of opportunities for degree level education than the Malays, compared to the population ratio. Of all the Chinese and Indian students enrolled in degree level education, more than half were enrolled in overseas institutions. 54.4% of all Chinese and 55.7% of all Indians had to seek such education in 1985, when local institutions could not absorb a larger enrollment. Comparatively, 20.2% of the Malays are also overseas in search of education. While the government seeks to ensure an equitable distribution of students by

ethnic group, the issue of demand for university places should also be of concern. The demand for places in higher education in Malaysia far exceeds the number of places available: for every one candidate admitted, at least one in 1970 and five in 1985 had to be turned away (see Table 4.46). Since the admission policy is based on the proportion of ethnic populations, and since the number of non-Malays who studied at overseas institutions was greater than that of Malays, it is therefore concluded that the large number of applicants who were unable to secure places in local institutions were non-Malays, and the overwhelming number of these were of Chinese ethnic origin (Selvaratnam, 1988). It must be noted that if the enrollment of non-Malay students in foreign institutions is used to balance the overall number of Malaysian students in tertiary education, then it must be admitted that such a balance is achieved only by having the respective communities spend large sums of money to educate their children. They, therefore, enjoy the benefits of the public expenditure on tertiary education only in a limited sense.

Changes in faculty enrollment for the country according to the categorizations used to allocate places are available up to 1975 (see Table 4.47). It can be seen

that the most dramatic changes in Malay representation have occurred in the areas pertaining to science and applied sciences, medical sciences, economics, engineering, agriculture and town planning. Since the faculty enrollment policy (that the composition of each faculty should reflect the proportion of population percentages) implemented since 1971 has not been altered, it is reasonable to assume that the figures from 1975 onwards would continue to reflect this trend. In the 1983/84 academic session, the intake to medicine, dentistry and pharmacy was 422 (71.0%) Malays and 172 (29.0%) non-Malays; for science and applied sciences, the numbers were 520 (52.7%) Malay students and 466 (47.3%) non-Malays; and for engineering there were 351 (56.6%) and 269 (43.4%), respectively, of Malays and non-Malays admitted (Malaysia, 1984).



Table 4.45  
 ENROLLMENT OF LOCALLY AND FOREIGN ENROLLED STUDENTS  
 AT DEGREE LEVEL

ETHNIC	1980			1985		
	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL
M	13610	5194	18804	23841	6034	29875
%	62.0	26.7	45.4	63.0	26.7	49.4
C	6848	11533	18381	11241	13406	24647
%	31.2	59.1	44.3	29.7	59.1	40.7
I	1252	2676	3928	2473	3108	5581
%	5.7	13.7	9.5	6.5	13.7	9.2
O	234	107	341	283	136	419
%	1.1	0.5	0.8	0.7	0.6	0.7
TOTAL	21944	19510	41454	37838	22684	60522
%	52.9	47.1		62.5	37.5	

Source: Malaysia, 1986, Fifth Malaysia Plan 1986-1990, Table 9-3.

Note: M: Malays and indigenous peoples of Sabah and Sarawak.  
 C: Chinese.  
 I: Indians.  
 O: Others (Eurasians and Ceylonese).

Table 4.46  
APPLICANTS AND UNIVERSITY ADMISSION 1968-1985

YEAR	APPLICANTS	ADMITTED
1968	3,200	2,000 (62.5%)
1970	5,324	3,561 (66.9%)
1977	25,998	5,953 (22.9%)
1981	16,698	5,847 (35.0%)
1983	28,858	6,890 (23.9%)
1985	38,000	7,388 (19.4%)

Source: Malaysia, Ministry of Education,  
Higher Education Division.

Table 4.47

ENROLLMENT IN SELECTED FIELDS OF STUDY AT DEGREE LEVEL  
BY RACE 1970-1975.

FIELDS OF STUDY	1970		1975	
	M	NM	M	NM
ECONOMICS	494	848	1287	444
LAW	-	-	124	87
HUMANITIES/SOCIAL SCIENCE	2165	1334	3659	1210
SCIENCE/APPLIED SCIENCE	188	1329	799	2295
MEDICINE, DENTISTRY & PHARMACY	100	481	399	622
AGRICULTURE	91	233	273	116
VETERINARY SCIENCE & FORESTRY	-	-	105	37
AGRI. BUSINESS & AGRI. ENGINEERING	-	-	179	42
ENGINEERING	5	387	361	774
ARCHITECTURE & TOWN PLANNING	-	-	361	118

Source: Malaysia, Third Malaysia Plan, 1976, pp. 402-403.

Note: M: Malays and other indigenous peoples.  
NM: Non-Malays - Chinese, Indians and Others.

#### 4.4:7 EFFECTS OF CONTROL OF ADMISSION ON QUALITY OF TERTIARY EDUCATION

The practice of preferential policy in admission to higher education has led to increasing Malay participation in tertiary education. Consequently, it has also increased the proportion of Malay graduates over the years. As seen in Table 4.48, during the Third Malaysia Plan (1976-1980), the proportion of Malay graduates increased to 55.3% from 45.1% in the Second Malaysia Plan (1971-1975), compared to non-Malay graduates. In the first three years of the Fourth Malaysia Plan (1981-1983), Malay graduates increased further to 62.4%, and the non-Malays to 37.6%. In comparison to the percentages of admissions of students, the percentages of Malay graduates were below the admissions in the Second and Third Malaysia Plans, while non-Malay graduates had performed better. However, during the first part of the Fourth Malaysia Plan, the percentage of Malay graduates had over-taken their percentage of admission by 2.0%.

The policy of taking Malays in large numbers into local institutions of higher learning also raises the question of whether this has an effect on the quality of higher education (Karthigesu, 1986). Apparently, the admission of large number of Malays into these

institutions implies that entry point qualifications are relaxed for many of them to enable them to gain entry, not entirely on merit, but on ethnicity and socioeconomic grounds. Of course, such a policy also helps the Indians and others who have gained better representation under the "quota system" of representation (see Table 4.42), presumably at different rates. The need for such policy, as discussed in Chapter Two, is that it is one of the ways to bring about the restructuring of society, since higher education based on merit alone would only perpetuate socioeconomic differences among the ethnic groups and social classes. Thus, it is necessary to examine the performance levels of students in these institutions to see whether the policy has produced any adverse effects. One of the ways to conduct such an examination is to consider the quality of students graduating, and one indicator that can gauge the quality of students is the classes of degrees in which they have qualified at the end of their studies.

Table 4.48

FIRST DEGREE, ADMISSION AND GRADUATION, AT MALAYSIAN COLLEGES /UNIVERSITIES, DURING THE SECOND, THIRD AND FOURTH MALAYSIA PLANS 1971-1983.

MALAYSIA PLAN		ADMISSION		GRADUATION	
			%		%
SECOND (1971-1975)	M	15,549	55.7	6,227	45.1
	NM	12,394	44.4	7,572	54.9
THIRD (1976-1980)	M	24,677	60.0	11,068	55.3
	NM	16,467	40.0	8,934	44.7
FOURTH (1981-1983)	M	24,528	60.1	8,878	62.4
	NM	16,299	39.9	5,359	37.6

Source: Malaysia, Ministry of Education, 1986, Technical Report, Table 111 and 112: 208 and 209.

The quality levels of graduates, measured by their achievement of classes in their degrees are divided into ethnic categories in Table 4.49. In general terms, the Chinese students out performed the other ethnic groups by capturing the higher strata of degrees (Class I and Class II-Upper). Malay students tended to perform at the lower levels, capturing only the lower strata of degrees (Class II-Lower, Class III and Pass). Indian students also performed at the lower levels, although their performance at higher levels was better than that of the Malays, but in overall performance, the Indians' performances are closer to those of Malays than to those of Chinese students. However, of 4,885 graduates in the honor classes in 1986, 2,873 (58.8%) were Malays, 1,609 (32.9%) were Chinese and 345 (7.1%) were Indians. Representing more than half the graduates, Malays are the ones who can be said to determine average performance levels in each class of degree. Out of 147 Class I degrees, the Malays obtained 20 (13.6%), the Chinese, 117 (79.6%), and the Indians, 7 (4.8%). Viewed in terms of performance within their own ethnic groups, 0.7% of Malays obtained Class I, while 7.3% of Chinese and 2.0% of Indians did so. In Class II (Upper), out of 1,305, Malays obtained 484 (37.1%), Chinese 728 (55.8%) and Indians 78 (6.0%). Seen within

ethnic groups, 16.9% Malays obtained Class II (Upper), while 42.3% of the Chinese and 22.6% Indians did so. At Class II (Lower), Class III and Pass degrees, the Malay and Indian percentages are much higher than that of the Chinese.

The trend is similar when one examines the arts degrees, science degrees and professional degrees, where the percentages of Malay performances at the higher strata of degrees get progressively lower, in that order (see Tables 4.50, 4.51, and 4.52). While 22.7% of the Malays attained the higher strata of honors degrees in the arts, only 12.5% did so in the science degrees, and 12.4% in the professional degrees. Among the Indians, the figures were 24.5%, 24.6% and 25.0%, respectively, while for the Chinese they were 46.9%, 58.5% and 52.2%, respectively, a far better performance than that of the Malays.

Besides weakness in culture, economics and environment, as commonly explained reasons for Malays failing to achieve excellence (Tham, 1983, Shaharuddin 1988), there are two other reasons offered as mitigating circumstances for their poor performance. It is articulated that the best Malay students are plucked out and sent to overseas institutions, leaving the next best to fill the enrollment of local universities. However,



this description best applies largely to science students, not to those pursuing arts subjects. Therefore, the performance of Malay students in the arts degree (Table 4.48) cannot be explained by this argument. It is also not true that the best of non-Malay students, assuming they are generally from the middle and upper income families, are also at overseas institutions, for this would negate the argument that the second best Malay students were competing with the best non-Malays within the local institutions. Another mitigating circumstance is that the best Malay students from the arts stream at the secondary school levels are directed to the science stream. This causes many of them to lose their academic excellence and perform only moderately (Karthigesu, 1986). However, the underlying reasons for lower performance of Malay students in local institutions need further systematic research.

Table 4.49

DISTRIBUTION OF GRADUATES IN MALAYSIAN UNIVERSITIES,  
1986, ACCORDING TO CLASS OF DEGREES.

CLASS OF DEGREES	MALAY %	CHINESE %	INDIAN %	OTHERS %	TOTAL		
HONORS	143	86.4	16	9.6	7 4.2	-	166
No Class %		5.0		1.0		2.0	3.4
HONORS	20	13.6	117	79.6	7 4.8	3 2.0	147
CLASS I %		0.7		7.3		2.0	3.0
HONORS	29	54.7	18	34.0	6 11.3	-	53
CLASS II % (No Division)		1.0		1.1		1.7	1.1
HONORS	484	37.0	728	55.8	78 6.0	15 1.2	1305
CLASS II % (Upper)		16.9		45.3		22.6	26.7
HONORS	1647	65.9	649	25.5	188 7.4	30 1.2	2541
CLASS II % (Lower)		58.3		40.3		54.5	52.0
HONORS	411	76.7	67	12.5	50 9.3	8 1.5	536
CLASS III %		14.3		4.2		14.5	11.0
PASS	112	81.8	14	10.2	9 6.6	2 1.5	137
DEGREE %		3.9		0.9		2.6	2.8
TOTAL	2873	58.8	1609	32.9	345 7.1	58 1.2	4885
%		100.0		100.0		100.0	100.0

Source: Convocation Souvenirs, 1986, cited from Karthigesu, 1986, Table 8.

Table 4.50

DISTRIBUTION OF GRADUATES IN ARTS DEGREES, 1986.  
(ARTS, ISLAMIC STUDIES, ECONOMICS AND SOCIAL SCIENCES)

CLASS OF DEGREES	MALAY %	CHINESE %	INDIAN %	OTHERS %	TOTAL
HONORS (No Class)	-	-	-	-	-
HONORS CLASS I %	9 25.7 0.6	24 68.6 3.6	2 5.7 1.2	-	35 1.5
HONORS CLASS II (No Division)	-	-	-	-	-
HONORS CLASS II % (Upper)	314 48.3 22.1	289 44.5 43.3	38 5.9 23.3	9 1.4 39.1	650 28.6
HONORS CLASS II % (Lower)	995 68.2 69.9	343 23.5 51.4	107 7.3 65.6	13 0.9 56.2	1458 64.0
HONORS CLASS III %	57 79.2 4.0	6 8.3 0.9	9 12.5 5.5	-	72 3.2
PASS DEGREE %	49 79.0 3.4	5 8.1 1.8	7 11.3 4.3	1 1.6 4.4	62 2.7
TOTAL %	1424 62.5 100.0	667 29.3 100.0	163 7.2 100.0	23 1.0 100.0	2277 100.0

Source: Convocation Souvenirs, 1986, cited from Karthigesu, 1986, Table 8-1.

Table 4.51

DISTRIBUTION OF GRADUATES IN SCIENCE DEGREES, 1986.  
(SCIENCES, COMPUTER STUDIES, APPLIED SCIENCES,  
HOUSING AND PLANNING.)

CLASS OF DEGREES	MALAY %	CHINESE %	INDIAN %	OTHERS %	TOTAL				
HONORS	139	87.4	14	8.8	6	3.8	-	159	
No Class %		12.6		2.2		4.5		8.3	
HONORS	9	12.7	56	78.9	3	4.2	3	4.2	71
CLASS I %		0.8		8.7		2.2		10.7	3.7
HONORS CLASS II No Division.	-	-	-	-	-	-	-	-	
HONORS	129	26.5	321	66.1	30	6.2	6	1.2	486
CLASS II % (Upper)		11.7		49.8		22.4		21.4	25.5
HONORS	501	63.3	215	27.2	64	8.1	12	1.5	792
CLASS II % (Lower)		45.1		33.3		47.8		42.9	41.5
HONORS	289	81.4	30	8.5	30	8.5	6	1.7	355
CLASS III %		26.3		4.7		22.4		21.4	18.6
PASS DEGREE	34	75.6	9	20.0	1	2.2	1	2.2	45
%		3.1		1.4		0.8		3.6	2.4
TOTAL	1101	57.7	645	33.8	134	7.0	28	1.5	1908
%		100.0		100.0		100.0		100.0	100.0

Source: Convocation Souvenirs, 1986, cited from Karthigesu, 1986, Table 8-2.

Table 4.52

DISTRIBUTION OF GRADUATES IN PROFESSIONAL DEGREES - 1986.  
(LAW, ACCOUNTANCY, ENGINEERING AND PHARMACY).

CLASS OF DEGREES	MALAY %	CHINESE %	INDIAN %	OTHERS %	TOTAL				
HONORS	4	57.1	2	28.6	1	14.3	-	7	
No Class %		1.2		0.7		2.1		1.0	
HONORS	2	4.9	37	90.2	2	4.9	-	41	
CLASS I %		0.6		12.5		4.2		5.9	
HONORS	29	54.7	18	34.0	6	11.3	-	53	
CLASS II % (No Division)		8.3		6.1		12.5		7.6	
HONORS	41	24.3	118	69.8	10	5.9	-	169	
CLASS II % (Upper)		11.8		39.7		20.8		24.1	
HONORS	178	61.2	91	31.3	17	5.8	5	1.7	291
CLASS II % (Lower)		51.2		30.6		35.4	71.4	41.6	
HONORS	65	59.6	31	28.4	11	10.1	2	1.8	109
CLASS III %		18.7		10.4		22.9	28.6	15.6	
PASS DEGREE	29	96.7	-		1	3.3	-	30	
%		8.3				2.1		4.3	
TOTAL	348	49.7	297	42.4	48	6.9	7	1.0	700
%		100.0		100.0		100.0	100.0	100.0	

Source: Convocation Souvenirs, 1986, cited from Karthigesu, 1986, Table 8-3.

## Chapter V

## THE UNIVERSITY OF SCIENCE, MALAYSIA.

## 5.1 ESTABLISHMENT AND DEVELOPMENT

The origins of the Universiti Sains Malaysia (the University of Science, Malaysia) can be traced to the early 1950's, when the state of Penang voiced the idea of establishing an institution of higher learning in Penang, besides what was then the University of Malaya in Singapore. However, it was only after the establishment of an independent University of Malaya in Kuala Lumpur, in January, 1962, that the Penang State Government began to press in a more concerted manner for the establishment of a second institution of tertiary education in Penang. On April 11, 1962 the Penang State Legislative Assembly unanimously passed the following resolution:

"This Assembly hereby resolves that, in the interest of Penang especially and North Malaya as a whole, representations should be made to the University of Malaya authorities for early action with regard to the establishment of a University College (of Arts and Science) for an Institution of similar status affiliated with the University of Malaya which could be the nucleus around which, ultimately, the University of Penang could be developed."

(Penang Legislative Assembly, April 1962, quoted from Sharom, 1979: 3).

The proposed project received wide and enthusiastic support from the people of Penang State. The State Government conveyed the idea to the Chancellor of the University of Malaya, who was also Malaysia's Prime Minister and received encouraging support (Sharom, 1979: 3). To intensify its efforts for the project, the State Government appointed the University of Penang Project Committee, comprised of an Indian, a Malay and three Chinese, with the following objective: "to study and explore all possibilities for the early establishment of the University College of Penang" (Sharom, 1979: 3).

In September 1962, the Federal Government of the Federation of Malaya formed a Higher Education Planning Committee under the chairmanship of the Minister of Education. The assignment of this Committee was "to review the arrangements ... for Higher Education and to make recommendations for the development and improvement of such education in the light of the foreseeable future and financial resources of the country" (Malaysia, 1967, Ministry of Education). The Report of this Committee, which was published in 1967, provided the basis for the establishment of new universities. A major recommendation of the Committee was the establishment of a University

College to be sited in Penang which would be ready to admit students in 1970.

In the meantime, the Ministry of Education advised the government of Penang State to submit a proposal regarding the need for another institution for tertiary education to be established in Penang, to the Higher Education Planning Committee. While preparing the proposal, the Penang State Government submitted, on November 21, 1964, a Memorandum to the Prime Minister, arguing the necessity for the university project in Penang.

In February 1967, the Minister of Education disclosed in the Federal Parliament that the Federal Government had approved the establishment of the University College of Penang, and it was possible to start a First Year Science class in May, 1967 by using the existing facilities available at the Malayan Teachers' College and the Technical Institute. However, the plan had to be shelved, largely because of financial considerations (Sharom, 1979: 4). In June 1967, the Prime Minister announced that the Federal Cabinet had approved the use of M\$25 million from a M\$150 million Japanese loan towards the establishment of the University College of Penang. The government of Penang State responded quickly, and on August 7, 1967, the



foundation stone for the University College of Penang was laid by the Prime Minister. In November, 1967, the Higher Education Planning Committee's Report was tabled in the Federal Parliament and was accepted in principle, especially the recommendation for the establishment of another institution of higher learning, a University College of Penang.

A University College of Penang Working Committee, chaired by the Minister of Education, was set up "to advise the Government on the steps which are necessary to establish a University College in Penang, and to make such recommendations as the Committee may consider necessary or desirable, including such matters as financing, courses of study, constitution, development, staffing and other relevant matters" (Sharom, 1979: 5). The Working Committee agreed to recommend to the Federal Government that the proposed higher educational institution in Penang should be established as a full university (Sharom, 1979: 5).

In April 1969, a Vice-Chancellor was appointed by the King and charged with the responsibilities of setting up and running the University of Penang. In June, 1967, the first group of 57 students were matriculated to read courses in the natural sciences. In July 1969, the draft constitution was framed, and on October 4, 1971, the

university was officially founded when the Incorporation Order was signed by the Minister of Education. Shortly afterwards, in April 1972, the university was advised by the Federal Government of Malaysia to change its name to the University of Science, Malaysia. According to official explanation, the new name was to bring into sharper focus the leadership role that the university was expected to play "in gathering and disseminating scientific knowledge as well as applying such knowledge for the use not only of the people of Penang but also for all Malaysians" (Sharom, 1979: 6).

The University of Science defined its main goal as that of widening the opportunities for university education in the country, particularly in the sciences. It was to prepare skillful and trained graduates for the public and private sector who would also be able to better develop society. Its courses and activities were guided by the following considerations: to meet national needs, to develop a regional character, and to provide a balance of subjects (Sharom, 1979: 6-8). In line with the continuing requirements for graduates in the natural sciences, the university, when it was established in 1969, began with schools of physics, mathematics, biological sciences and Chemical Sciences. In view of the great shortage of

science teachers for secondary schools, in 1972 the university introduced an integrated and concurrent Bachelor of Science with its education course. In 1973, the School of Pharmaceutical Sciences was established in response to the nation's needs for professional pharmacists. In the same year, the School of Applied Science was begun, again in response to the need for courses in chemical technology, with particular reference to rubber (Sharom, 1979: 9). At the same time, the university's planners were convinced of the great need for graduate manpower with a sound grasp of planning, design and construction, building technology and management. It was in this light that the School of Housing, Building and Planning was established in 1973. Although the academic emphasis of the university is on the sciences and technology, the Schools of Comparative Social Sciences and Humanities were also established in 1970. This was in recognition of the need to provide a balance among the courses at the university, and because the arts, too, play a positive role in national development (Sharom, 1979: 10). In 1979, the School of Medical Sciences was established in response to the urgent manpower needs in medical and health services. The first group of students were admitted in the 1981/82 academic session. In 1983,

the Computer Science Unit was upgraded to the School of Computer Science, and the following year, four new schools were established: the Schools of Communications, Industrial Technology, Management, and Engineering Sciences (Prospectus, 1985-86, University Sains Malaysia, 1986), (see Table 5.1). Thus, within a decade and a half, the university has made much progress.

In view of the shortage of scientific and technological personnel, the university has given science and technology an emphasis in its curriculum. Besides running degree level courses, the university is also playing an important role in providing shorter term courses to meet specific needs. It offers one-year courses, such as Educational Technology and Educational Broadcasting for the Ministry of Education, Creative Arts for the Ministry of Culture, Youth and Sports, and Mass Communications for the Ministry of Information and Broadcasting. In addition, numerous other shorter intensive courses are offered for teachers, hospital technicians, college lecturers, and even the private sector in areas ranging from the teaching of physics, to the use of computers in architectural practice (Sharom, 1979: 14).

Table 5.1

UNIVERSITY OF SCIENCE, MALAYSIA,  
ESTABLISHMENT OF ACADEMIC SCHOOLS - 1970-1985

YEAR	SCHOOL
1969/70	1 SCHOOL OF BIOLOGICAL SCIENCES
	2 SCHOOL OF CHEMICAL SCIENCES
	3 SCHOOL OF PHYSICS
	4 SCHOOL OF MATHEMATICS
	5 SCHOOL OF COMPARATIVE SOCIAL SCIENCES
	6 SCHOOL OF HUMANITIES
1972/73	1 SCHOOL OF EDUCATIONAL STUDIES
1973/74	1 SCHOOL OF PHARMACEUTICAL SCIENCES
	2 SCHOOL OF HOUSING, BUILDING AND PLANNING
	3 SCHOOL OF APPLIED SCIENCES.
1979/80	1 SCHOOL OF MEDICAL SCIENCES
1983/84	1 SCHOOL OF COMPUTER SCIENCE
	2 SCHOOL OF MANAGEMENT
	3 SCHOOL OF COMMUNICATION
1984/85	1 SCHOOL OF ENGINEERING SCIENCES
	2 SCHOOL OF INDUSTRIAL TECHNOLOGY.

Source: Prospectus, 1985-86, Universiti Sains Malaysia, 1986, Universiti Sains Malaysia.

Note : Schools of Biological Sciences, Chemical Sciences, Physics and Mathematics later came under the School of Natural Sciences.

Besides its teaching responsibilities, the university is also concerned with providing opportunities for adults who wish to extend their education by preparing themselves for degree qualifications. The university firmly believes that this is a significant social contribution, since large numbers of Malaysians, for one reason or another, do not have the opportunity to pursue higher education (Sharom, 1979: 15). Thus, an Off-Campus Program was introduced in 1971 in the areas of humanities and social sciences, and in 1973 for the natural sciences. Essentially, this program caters to adults above the age of 23, who are in full time employment, and who seek a university education leading to a degree. The program is divided into two parts: the first, which takes a minimum of four years, and beginning in 1986 it became five years, is conducted while the students are simultaneously in employment, and the second requires them to attend campus full time for one year to complete the final part of the program. The content of the first part of the program is based on the course content of the full time internal offerings, and along with course materials which are sent by mail, it is supplemented by lecturer visits, and a three-week compulsory intensive course by tutorials, seminars and practical work. In the second part the

students integrate themselves with others in the environment of the university campus.

## 5.2 THE PREFERENTIAL POLICY AND STUDENT ADMISSION

The recommendations of the Committee to study Campus Life of students of the University of Malaya (The Majid Report) of 1971 - - that the University should ensure that the racial composition of its student population as a whole, and in each of its faculties, should reflect the racial composition of the country - - became the official guideline for admissions of students to universities when the Minister of Education made it official in 1974. Since the founding of the University of Science, Malaysia had admitted its first batch of students in 1969; therefore, the admission policy did not affect university student admission until 1975. In Table 5.2 we see that during the academic years of 1969/70 through 1974/75, the proportion of Malay students admitted to the University was 32.4%, compared to 67.6% non-Malays. However, in the 1975/76 academic year, when the preferential policy came into effect, the number of non-Malays was reduced to 207 from 447 in the previous year, while the same number of Malays was admitted. From the 1975/76 academic year until

1985/86, the number of Malays admitted was higher than that of non-Malays, at the annual average of 539 and 467 respectively. Between the 1975/76 and 1979/80 admission years, Malays constituted 55.0% of students admitted, and from 1980/81 to 1984/85, the proportion of Malay students declined to 53.0%. However, the overall proportion of Malays during the seventeen years of its establishment was 50.0%, and it was during the period of 1975/76 to 1979/80 that the proportion of Malays came close to the proportion of Malay the population in the country, as explicitly required in the preferential policy.

Examining the proportion of Malay and non-Malay students in various academic schools, one sees that the ethnic group representations have varied from school to school over the years. Except in the School of Medical Sciences and the School of Engineering Sciences, where Malays constituted 81.0% and 67.5% of the students (Tables 5.11 and 5.15), and in the School of Natural Sciences and the School of Education (Sciences), where non-Malays constituted 70.0% and 52.0% of the students admitted over the years (see Tables 5.3 and 5.8), the composition of Malay students ranged from 52.0% to 58.0%. The percentages of admission are: in the School of Humanities, 58.0%



(Table 5.4); Social Science, 56.0% (Table 5.5); Housing, Building and Planning, 55.0% (Table 5.6); School of Education (Humanities), 52.0% (Table 5.7); Pharmaceutical Sciences, 57.0% (Table 5.9); Applied Sciences, 55.0% (Table 5.10); Computer Sciences, 58.0% (Table 5.12); Mass Communication, 54.0% (Table 5.13); Management, 54.7% (Table 5.14); and Industrial Technology, 53.4% (Table 5.16). In science-related academic schools that were established in the 1970s, such as the schools of Natural Sciences, Education (Science) and Applied Sciences, Malay students who were admitted in the early years were outnumbered by non-Malays. In the School of Natural Sciences, in the academic years of 1969/70 to 1974/75, Malay students constituted only 5.0% (58 students) of admissions, the other 95.0% (1,112 students) being non-Malays (Table 5.3). In the School of Education (Science), the percentage of Malays admitted to the school in the academic years of 1975/76 to 1977/78 was 28.0% (81 students), and that of non-Malays was 72.0% (208 students) (Table 5.8). In the School of Applied Sciences, during the first three years of its establishment, the Malay admission percentage was 47.7% (53 students) and that of non-Malays, 52.3% (58 students) (Table 5.10). However, in later years, the percentages of Malay students

admitted to these schools were larger than those of the non-Malays at the average of 45% to 55% respectively, except in the School of Natural Sciences, where the Malays were still fewer than the non-Malays by 49% to 51%. In science-related academic schools that were established in later years, such as the School of Medical Sciences, the School of Computer Sciences, the School of Engineering Sciences and the School of Industrial Technology, the intake of Malay students was higher than that of non-Malays in all years at the average of 65% and 45% respectively. In the arts-related academic schools, such as the School of Humanities, the School of Social Sciences and the School of Education (Humanities), the percentages of Malay students admitted to these schools were higher than those of non-Malays at the annual average of 53% and 47% respectively.. The small percentages of Malay students in science related academic schools can be attributed to the small number of qualified Malay students in science stream classes at the Sixth Form (see Chapter IV, Table 4.21).

Table 5.2

UNIVERSITY OF SCIENCE, MALAYSIA,  
STUDENTS ADMISSION 1969/70 - 1985/86.

YEAR	MALAYS	%	NON-MALAYS	%	TOTAL
1969/70	1	1.8	56	98.2	57
1970/71	67	34.7	126	65.3	193
1971/72	129	31.7	278	68.3	407
1972/73	138	29.4	332	70.6	470
1973/74	206	34.0	399	66.0	605
1974/75	244	35.3	447	64.7	691
1975/76	244	54.1	207	45.9	451
1976/77	345	53.0	305	47.0	650
1977/78	339	53.4	296	46.6	635
1978/79	402	56.1	314	43.9	716
1979/80	413	55.2	335	44.8	748
1980/81	437	53.0	387	47.0	824
1981/82	520	52.9	463	47.1	983
1982/83	539	51.0	518	49.0	1057
1983/84	728	53.1	642	46.9	1370
1984/85	805	55.0	660	45.0	1465
1985/86	860	53.3	751	46.7	1611
<b>ADMISSION</b>					
1969/70 - 1985/86	6417	49.6	6516	50.4	12933
1969/70 - 1974/75	785	32.4	1638	67.6	2423
1975/76 - 1979/80	1743	54.5	1457	45.5	3200
1980/81 - 1984/85	3029	53.1	2670	46.9	5699

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.3

## STUDENT ADMISSION IN SCHOOL OF NATURAL SCIENCES

YEAR	MALAY	NON-MALAY	TOTAL
1969/70	1	56	57
1970/71	7	62	69
1971/72	3	171	174
1972/73	8	218	226
1973/74	15	288	303
1974/75	24	317	341
1975/76	35	46	81
1976/77	64	64	128
1977/78	69	67	136
1978/79	93	61	154
1979/80	81	69	150
1980/81	79	92	171
1981/82	99	111	200
1982/83	103	143	246
1983/84	122	142	264
1984/85	85	133	218
1985/86	79	175	254
<b>ADMISSION</b>			
1969/70 - 1985/86	964	2215	3179
‡	30.3	69.7	
1969/70 - 1974/75	58	1112	1170
‡	5.0	95.0	
1975/76 - 1984/85	761	785	1546
‡	49.2	50.8	

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Note: Departments in the School of Natural Sciences: Mathematics; Biology; Physics; Chemistry; Computer Science.



Table 5.5  
STUDENT ADMISSION IN SCHOOL OF SOCIAL SCIENCES

YEAR	MALAY	NON-MALAY	TOTAL
1970/71	33	46	79
1971/72	69	63	132
1972/73	63	61	124
1973/74	85	30	115
1974/75	102	46	148
1975/76	96	45	137
1976/77	89	60	149
1977/78	74	42	116
1978/79	74	55	129
1979/80	76	61	137
1980/81	77	66	143
1981/82	69	73	142
1982/83	75	69	144
1983/84	66	85	151
1984/85	75	48	123
1985/86	71	77	148
<b>ADMISSION</b>			
1970/71 - 1985/86	1,194	923	2,117
%	56.4	43.6	
1970/71 - 1974/75	352	246	598
%	58.9	41.1	
1975/76 - 1984/85	696	600	1,296
%	53.7	46.3	

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Note: Departments in the School of Social Sciences: Economics; Development Studies; Management; Development and Social Administration; Political Science; Sociology and Anthropology.

Table 5.6  
 STUDENT ADMISSION IN  
 SCHOOL OF HOUSING, BUILDING AND PLANNING

YEAR	MALAY	NON-MALAY	TOTAL
1973/74	16	15	31
1974/75	21	34	55
1975/76	9	11	20
1976/77	28	22	50
1977/78	22	18	40
1978/79	23	19	42
1979/80	28	20	48
1980/81	52	21	73
1981/82	43	34	77
1982/83	40	41	81
1983/84	48	40	88
1984/85	54	39	93
1985/86	50	41	91
<b>ADMISSION</b>			
1973/74 - 1985/85	434 (55.0%)	355 (45.0%)	789
1975/76 - 1984/85	347 (56.7%)	265 (43.3%)	612

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

The shortage of qualified Malay students in science-related subjects was overcome when the university established the Matriculation Program in 1974, which prepared Malay students for science related academic schools at the university. Until 1986, the program had prepared 3,816 Malay students for admission to the University (Matriculation Program Division, 1988). Between the academic program years of 1978/79 and 1985/86, out of 3,332 students admitted to the program, 3,184 or 95.6% had passed (Table 5.17).



Table 5.7

## STUDENT ADMISSION IN SCHOOL OF EDUCATION (HUMANITIES).

YEAR	MALAY	NON-MALAY	TOTAL
1974/75	24	33	57
1975/76	25	29	54
1976/77	26	27	53
1977/78	31	28	59
1978/79	37	23	60
1979/80	33	26	59
1980/81	37	32	69
1981/82	34	35	69
1982/83	35	35	70
1983/84	46	39	85
1984/85	55	55	110
1985/86	101	91	192
<b>ADMISSION</b>			
1974/75 - 1985/86	484 (51.7%)	453 (48.3%)	937
1975/76 - 1984/85	359 (52.2%)	329 (47.8%)	688

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.8  
STUDENT ADMISSION IN SCHOOL OF EDUCATION (SCIENCE).

YEAR	MALAY	NON-MALAY	TOTAL
1975/76	4	68	72
1976/77	27	68	95
1977/78	50	72	122
1978/79	78	75	153
1979/80	90	66	156
1980/81	77	76	153
1981/82	102	95	197
1982/83	77	102	179
1983/84	125	122	247
1984/85	126	113	239
1985/86	104	84	188
<b>ADMISSION</b>			
1975/76 - 1985/86	860 (47.8%)	941 (52.2%)	1801
1975/76 - 1977/78	81 (28.0%)	208 (72.0%)	289

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.9

## STUDENT ADMISSION IN SCHOOL OF PHARMACEUTICAL SCIENCES.

YEAR	MALAY	NON-MALAY	TOTAL
1976/77	30	22	52
1977/78	31	21	52
1978/79	28	23	51
1979/80	29	21	50
1980/81	35	28	63
1981/82	35	26	61
1982/83	33	28	61
1983/84	33	27	60
1984/85	34	26	60
1985/86	33	20	53
ADMISSION 1976/77 - 1985/86	321 (57.0%)	242 (43.0%)	563

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.10

## STUDENT ADMISSION IN SCHOOL OF APPLIED SCIENCES

YEAR	MALAY	NON-MALAY	TOTAL
1976/77	17	20	37
1977/78	13	17	30
1978/79	23	21	44
1979/80	26	23	49
1980/81	34	27	61
1981/82	43	33	76
1982/83	47	32	79
1983/84	59	38	97
ADMISSION			
1976/77 - 1983/84	262 (55.4%)	211 (44.6%)	473
1976/77 - 1978/79	53 (47.7%)	58 (52.3%)	111

Note: School of Applied Science was discontinued in 1984.  
 Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.11

## STUDENT ADMISSION IN SCHOOL OF MEDICAL SCIENCES

YEAR	MALAY	NON-MALAY	TOTAL
1981/82	51	13	64
1982/83	77	18	95
1983/84	78	18	96
1984/85	64	16	80
1985/86	76	19	95
ADMISSION			
1981/82 - 1985/86	346 (80.5%)	84 (19.5%)	430

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.12

## STUDENT ADMISSION IN SCHOOL OF COMPUTER SCIENCE.

YEAR	MALAY	NON-MALAY	TOTAL
1983/84	59	44	103
1984/85	67	52	119
1985/86	66	43	109
ADMISSION 1983/84 - 1985/86	192 (58.0%)	139 (42.0%)	331

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.13

## STUDENT ADMISSION IN SCHOOL OF MASS COMMUNICATION

YEAR	MALAY	NON-MALAY	TOTAL
1984/85	28	27	55
1985/86	41	33	74
ADMISSION 1984/85 - 1985/86	69 (53.5%)	60 (46.5%)	129

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.14

## STUDENT ADMISSION IN SCHOOL OF MANAGEMENT

YEAR	MALAY	NON-MALAY	TOTAL
1984/85	42	37	79
1985/86	52	41	93
ADMISSION 1984/85 - 1985/86	94 (54.7%)	78 (45.3%)	172

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.15

## STUDENT ADMISSION IN SCHOOL OF ENGINEERING SCIENCES.

YEAR	MALAY	NON-MALAY	TOTAL
1984/85	47	26	73
1985/86	65	28	93
ADMISSION 1984/85 - 1985/96	112 (67.5%)	54 (32.5%)	166

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.16

## STUDENT ADMISSION IN SCHOOL OF INDUSTRIAL TECHNOLOGY

YEAR	MALAY	NON-MALAY	TOTAL
1984/85	21	21	42
1985/86	26	20	46
<b>ADMISSION</b>			
1984/85 - 1985/86	47 (53.4%)	41 (46.6%)	88

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.17

MATRICULATION PROGRAM - YEAR II,  
UNIVERSITY OF SCIENCE, MALAYSIA.

YEAR	ADMISSION	PASS	%	FAIL	%
1978/79	216	181	83.3	35	16.2
1979/80	222	218	98.2	4	1.8
1980/81	331	324	97.8	7	2.2
1981/82	359	354	98.6	5	1.4
1982/83	484	480	99.2	4	0.8
1983/84	496	491	99.0	5	1.0
1984/85	540	519	96.1	21	3.9
1985/86	684	617	90.2	67	9.8
<b>ADMISSION</b>					
1978/79 - 1985/86	3332	3184	95.6	148	4.4

Source: Universiti Sains Malaysia, Matriculation Division, 1988.

Matriculation programs have been established especially for Malay students, as recommended by the Committee chaired by Abdul Majid in 1971, to provide institutions for "special assistance and tuition in pre-medical, pre-science and pre-engineering courses" (Malaysia, 1971, Committee Report: 128). Those students who had passed the second year of the programs were admitted directly to various science-related academic schools in the university. Between the academic years of 1979/80 and 1985/86, 2,528 Malay students from the Matriculation Programs were admitted to nine science-related academic schools (Table 5.18). This amounts to 37.0%, or 4,302 of the total admission of Malay students in this period to all academic schools in the university, and 88.7% of Malay students admitted to those schools where students from Matriculation Programs were admitted.

The preferential policy in higher education also applies to student admissions in the Off-Campus Program. During its establishment, from 1971/72 until 1985/86, the Malay students admitted under the programs constituted 61.3%, 58.7% and 35.1% in the Schools of Humanities, Social Sciences and Natural Sciences, respectively. The proportion of Malay students in the School of Natural



Sciences under the Off-Campus Program did not meet the proportion stipulated by the preferential policy for higher education (Table 5.19).

Table 5.18

DISTRIBUTION OF MATRICULATION PROGRAM STUDENTS  
1979-1986

SCHOOL	79/80	80/1	81/2	82/3	83/4	84/5	85/6	TOTAL
APPL SC	20	36	42	50	59	67	-	274
PHAR SC	31	38	35	36	34	34	34	242
NAT SC	35	43	73	90	106	93	85	525
COMP SC	-	-	-	-	56	65	66	187
EDU SC	77	61	77	44	91	105	104	559
HOUSE B.P	17	39	37	40	31	34	36	234
MEDIC SC	-	-	55	82	87	66	80	370
MANAGEMENT	-	-	-	-	-	19	27	46
ENGIN SC	-	-	-	-	-	-	91	91
TOTAL	180	217	319	342	464	483	523	2528

Source: Universiti Sains Malaysia,  
Matriculation Division, 1988.

Table 5.19  
STUDENT ADMISSION IN OFF-CAMPUS PROGRAMS 1971-1985

YEAR	HUMANITIES		SOCIAL SC		NATURAL SC	
	M	NM	M	NM	M	NM
1971/72	24	24	11	30	-	-
1972/73	35	31	33	32	-	-
1973/74	48	21	39	46	1	26
1974/75	49	22	49	32	2	38
1975/76	64	19	47	39	28	53
1976/77	46	28	53	19	49	39
1977/78	41	30	44	23	41	27
1978/79	35	26	39	13	4	52
1979/80	30	27	34	25	33	47
1980/81	31	28	31	29	21	46
1981/82	31	29	31	29	32	59
1982/83	53	38	54	34	32	54
1983/84	51	31	48	37	42	74
1984/85	69	44	59	36	31	63
1985/86	71	32	109	56	26	54
<b>ADMISSION</b>						
1971/2 - 1985/6	681	430	681	480	342	632
%	61.3	38.7	58.7	41.3	35.1	64.9

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Note: M: Malay  
NM: Non-Malay.

### 5.3 GRADUATION

An examination of the past seventeen graduation years, from 1972 to 1988 (Table 5.20) shows that Malays constitute 47.0% and non-Malays 53.0% of total graduates. This proportion does not reflect the required ethnic proportion of the population as prescribed by the preferential policy for higher education in the country. The proportion of Malay graduates increased from 36.9% (802) in the first six years of graduation, 1972 to 1977, to 48.0% (1,564) in the next five years, 1978 to 1982, but it decreased to 47.8% (3,051) in the later period, between 1983 to 1988. When compared to the proportion of Malay students in the admission period from 1969 to 1985, the proportion of Malay graduates in the period of 1972 to 1988 decreased by 2.6% (Table 5.21). In the admission years of 1969 to 1977 and the corresponding graduation years of 1972 to 1981, Malays constituted 41.2% and 41.7% of the total, an increase of 0.5%. However, in the graduation years of 1982 to 1988, the percentage of Malay graduates was 50.2%, compared to 53.6% in the corresponding admission period of 1978 to 1984, which shows a difference of 2.4%.

In the schools of Natural Sciences, Applied Sciences, Education (Sciences) and Pharmaceutical Sciences, and

Education (Humanities), Malay graduates constituted 35.8%, 42.8%, 30.8%, 48.8% and 47.5% respectively (Tables 5.22, 5.23 and 5.24). There has been an increase in Malay graduates from these schools between the graduation years proceeding and following 1982. In Schools of Natural Sciences, Malay graduates increased from 27.4% (196) to 39.7% (208); in Applied Sciences, from 12.2% (20) to 54.5% (208); in Education (Sciences), from 4.7% (33) to 46.2% (554); in Pharmaceutical Sciences, from 31.1% (95) to 57.5% (233); and in Education (Humanities), from 40.5% (102) to 50.6% (280).

In the Schools of Social Sciences, Humanities and Housing, Building and Planning, Malay graduates constituted 54.6%, 59.1% and 52.8%, respectively, of their graduating classes (Tables 5.23 and 5.24). Except in the School of Housing, Building and Planning, where the proportion of Malay graduates increased from 42.5% (88) to 57.4% (272) in the period before and after the 1982 convocation year, the percentages of Malay graduates in the Schools of Social Sciences and Humanities decreased from 54.9% to 54.3% and from 65.2% to 52.6% in the respective schools.

Table 5.20

## UNIVERSITY OF SCIENCE, MALAYSIA - GRADUATION 1972-1988

YEAR	MALAY	%	NON-MALAY	%	TOTAL
1972	1	2.6	38	97.4	39
1973	55	35.7	99	64.3	154
1974	123	41.1	176	58.9	299
1975	132	33.5	262	66.5	394
1976	202	39.4	311	60.6	513
1977	289	37.3	486	62.7	775
1978	326	44.4	408	55.6	734
1979	269	42.3	360	57.2	629
1980	315	46.4	364	53.6	679
1981	247	52.2	226	47.8	473
1982	407	53.3	366	46.7	763
1983	470	59.0	326	41.0	796
1984	490	49.3	504	50.7	994
1985	466	48.1	503	51.9	969
1986	528	46.1	618	53.9	1146
1987	658	48.4	702	51.6	1360
1988	709	51.3	673	48.7	1382
<b>GRADUATION</b>					
1972-1988	5687	47.0	6422	53.0	12109
1972-1977	802	36.9	1372	63.1	2174
1978-1982	1564	48.0	1694	52.0	3258
1983-1988	3051	47.8	3326	52.2	6377

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.21

ADMISSION AND GRADUATION  
IN UNIVERSITY OF SCIENCE, MALAYSIA

YEAR	ADMISSION				GRADUATION			
	MALAY	%	NON-MALAY	%	MALAY	%	NON-MALAY	%
	1969 - 1985				1972 - 1988			
	6417	49.6	6516	50.4	5687	47.0	6422	53.0
	1969 - 1977				1972 - 1981			
	1713	41.2	2446	58.8	1956	41.7	2730	58.3
	1978 - 1984				1982 - 1988			
	4704	53.6	4070	46.4	3728	50.2	3692	49.8

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.



Table 5.23

GRADUATION ACCORDING TO ACADEMIC SCHOOL 1972-1988  
UNIVERSITY OF SCIENCE, MALAYSIA

YEAR	PHARMACEUTICAL SC.		H.B. & PLANNING.		
	MALAY	NON-MALAY	MALAY	NON-MALAY	
1972	-	-	-	-	
1973	-	-	-	-	
1974	-	-	-	-	
1975	2	15	-	-	
1976	7	24	5	17	
1977	3	33	0	24	
1978	11	28	11	22	
1979	16	20	21	20	
1980	29	20	31	20	
1981	27	21	20	16	
1982	25	21	21	21	
1983	31	23	33	14	
1984	34	27	48	23	
1985	34	23	35	30	
1986	34	25	33	37	
1987	33	25	47	38	
1988	32	28	55	39	
GRADUATION					
1975-1988	318	333	1976-1988	360	321
%	48.8	51.2		52.8	47.2
1975-1981	95	161	1976-1981	88	119
%	31.1	62.9		42.5	57.5
1982-1988	233	172	1982-1988	272	202
%	57.5	42.5		57.4	42.6

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.



Table 5.24  
 GRADUATION ACCORDING TO ACADEMIC SCHOOLS 1972-1988  
 UNIVERSITY OF SCIENCE, MALAYSIA

YEAR	SOCIAL SC.		HUMANITIES		EDU HUMANITIES	
	M	NM	M	NM	M	NM
1972	-	-	-	-	-	-
1973	30	45	24	16	-	-
1974	60	67	55	41	-	-
1975	60	62	64	64	-	-
1976	99	65	79	38	-	-
1977	132	70	118	54	19	33
1978	132	71	119	48	11	31
1979	80	101	114	44	16	30
1980	85	89	90	48	24	28
1981	41	21	33	18	32	28
1982	100	60	73	64	34	24
1983	94	58	61	49	35	30
1984	113	100	72	78	42	34
1985	90	101	57	60	37	36
1986	103	94	84	64	33	52
1987	112	113	97	96	43	45
1988	84	59	83	64	58	54
1972-1988	1415	1177	1223	846	384	425
%	54.6	45.4	59.1	40.9	47.5	52.5
1972-1981	719	591	696	371	102	150
%	54.9	45.1	65.2	34.8	40.5	59.5
1982-1988	696	585	527	475	282	275
%	54.3	45.7	52.6	47.4	50.6	49.4

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Note: M: Malay

NM: Non-Malay.

In the School of Medical Sciences, 79.0% (167) of the graduates since 1986 were Malays, and 21.0% (44) non-Malays (Table 5.25). This proportion corresponds to admissions, in which Malays constituted 81.0% of the students in the school. In the School of Computer Science, in the two years of graduation, Malays constituted 53.3% (106) of its graduates. In the first batch of these graduates, Malays constituted 47.8% (32) in the School of Management; 53.8% (28) in the School of Engineering Sciences; 46.8% (22) in the School of Communication; and 13.0% (3) in the School of Industrial Technology (Table 5.26). The proportion of Malays in the School of Industrial Technology was the lowest among the newly established schools.

Table 5.25

GRADUATION ACCORDING TO ACADEMIC SCHOOLS 1986-1988  
UNIVERSITY OF SCIENCE, MALAYSIA

YEAR	MEDICAL SC		COMPUTER SC	
	M	NM	M	NM
1986	39	11	-	-
1987	71	13	51	43
1988	57	20	55	50
GRADUATION				
1986-1988	167	44	106	93
%	79.1	20.9	53.3	46.7

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

Table 5.26

GRADUATION ACCORDING TO ACADEMIC SCHOOLS  
UNIVERSITY OF SCIENCE, MALAYSIA.

SCHOOL	YEAR 1988	
	MALAY	NON-MALAY
MANAGEMENT	32 (47.8%)	35 (52.2%)
ENGINEERING	28 (53.8%)	24 (46.2%)
COMMUNICATION	22 (46.8%)	25 (53.2%)
INDUSTRIAL TECHNOLOGY	3 (13.0%)	20 (87.0%)

Source: Universiti Sains Malaysia, Admission and Record Division, 1988.

#### 5.4 GENDER

Examining gender distribution in educational development between 1974 and 1985 (Table 5.27), we see that the distribution of female students in lower, upper, post-secondary and higher education in Malaysia has improved greatly over the decade. In lower education, female student representation has gained more than 4.0%, from 44.3% in 1974 to 48.7% in 1985. At the upper secondary level, the gain was 9.0%, and at the post-secondary level it was 6.0%. In higher education, female students have improved by 12.0%, from 29.1% in 1974 to 40.0% in 1985 (Table 5.27). On the average, during the decade between 1974 and 1985, male students constituted 53.0% of all students in lower and upper secondary education, and 51.0% in post-secondary education. However, in higher education, male students represented 64.0%, more than two-thirds of the enrollment at local universities. Of the Malay student composition at the University of Science, the enrollment of females increased from 33.5% in the graduating class of 1982 to 45.4% in 1985 and 41.3% in 1988, an increase of 8.0% over the period. Male Malay students, on the other hand, experienced a decrease from 66.5% in 1982 to 58.7% in 1988. On the average, the composition of male and female

Malay students at the University of Science, Malaysia, i.e., 61.8% male and 38.0% female, is better than the gender composition of students in higher education in the country as a whole, i.e., 64.3% male, and 36.0% female (Tables 5.27 and 5.28).

Table 5.27

PERCENTAGES OF STUDENTS ACCORDING TO GENDER  
IN LOWER, UPPER, POST AND HIGHER EDUCATION IN MALAYSIA  
IN 1974, 1980, 1983 AND 1985.

YEAR	LOWER		UPPER		POST		HIGHER	
	M	F	M	F	M	F	M	F
1974	55.7	44.3	59.1	40.9	56.7	43.3	70.9	29.1
1980	52.2	47.8	53.3	46.7	49.7	50.3	65.8	34.2
1983	51.2	48.8	51.1	48.9	47.8	52.2	61.2	39.8
1985	51.3	48.7	50.2	49.8	50.9	49.1	59.2	40.8
AVERAGE:	52.6	47.4	53.4	46.6	51.3	48.7	64.3	36.0

Source: Malaysia, 1978, Educational Statistics of Malaysia, 1974-1975; Malaysia, 1986, Educational Statistics of Malaysia, 1980-1985.

Note: M: Male F: Female.

Table 5.28

MALAY GRADUATES ACCORDING TO GENDER  
UNIVERSITY OF SCIENCE, MALAYSIA.

GRADUATION YEAR	MALE	%	FEMALE	%	TOTAL
1982	276	66.5	139	33.5	415
1983	309	66.2	158	33.8	467
1984	333	65.7	174	34.3	507
1985	260	54.6	216	45.4	476
1986	334	60.3	219	39.7	553
1987	390	60.3	257	39.7	647
1988	423	58.7	298	41.3	721
AVERAGE		61.8		38.0	

Source: Universiti Sains Malaysia, 1988, Admission  
and Record Division.

In examining gender distribution among ethnic groups in graduating classes of 1982, 1985 and 1988 (Table 5.29), male graduates constituted 58.8%, and female graduates, 41.2%. Within the Malay graduates, the gender composition was 60% males and 40% females, and within the Chinese and Indians, the figures are 56.3% and 60.2% males and 43.7% and 39.8% females, respectively. Malay female graduates increased from 33.5% in 1982 to 45.4% in 1985, but decreased to 41.3% in 1988. Indian female graduates also experienced an increased proportion in 1985, from 36.8% in 1982 to 41.9% in 1985, but declined to 40.7% in 1988. On

the other hand, Chinese female graduates increased steadily from 37.6% in 1982 to 42.3% in 1985, and to 51.2% in 1988. Of female graduates in these years, Malay female graduates constituted 50.2%, and Chinese and Indian female graduates, 42.2% and 7.5%, respectively. Among the male graduates, Malays were 54.6%, Chinese, 38.2% and Indians, 8.2%.

The distribution of Malay graduates in 1979, 1985 and 1989 according to gender and science and arts related schools (Table 5.30) shows an increased representation of Malay females in both areas of study. In science related schools, the composition of Malay females increased from 40.7% in 1979 to 48.7% in 1985 and 49.9% in 1989, an increase of 9.2%. Malay males, on the other hand, decreased from 59.3% to 51.3% and 50.1% in the same years. In arts related schools, Malay female representation increased by almost three times, from 17.0% in 1979 to 40.5% in 1985 and 45.9% in 1989. Malay males comprised 54.7% in 1989, compared to 83% in 1979 and 59.5% in 1985.

In science related schools, Malay females were better represented in Science Education, Pharmacy, Medical and Computer Science. In other areas, their representation was below 50%. In arts related schools, Malay females were highly represented only in Humanities Education, where

they were more than 66%, and in other schools, their representation was lower than that of Malay males.

Table 5.29

DISTRIBUTION OF GRADUATES ACCORDING TO GENDER  
AND ETHNIC GROUPS - 1982, 1985, 1988.

YEAR	ETHNIC	MALE	%	FEMALE	%	TOTAL
1982	MALAYS	276	66.5	139	33.5	415
	CHINESE	186	62.4	112	37.6	298
	INDIANS	24	63.2	14	36.8	38
	SUB-TOTAL	486	64.7	265	35.3	751
1985	MALAYS	260	54.6	216	45.4	476
	CHINESE	228	57.7	167	42.3	395
	INDIANS	50	58.1	36	41.9	86
	SUB-TOTAL	538	56.2	419	43.8	957
1988	MALAYS	423	58.7	298	41.3	721
	CHINESE	258	48.8	271	51.2	529
	INDIANS	70	59.3	48	40.7	118
	SUB-TOTAL	751	54.9	617	45.1	1368
TOTAL AVERAGE			58.8		41.2	
AVERAGE 1982-1988						
	MALAYS		60.0		40.0	100.0
	CHINESE		56.3		43.7	100.0
	INDIANS		60.2		39.8	100.0

Source: University Sains Malaysia, 1988,  
Admission and Record Division.



Table 5.30

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO GENDER  
AND SCIENCE AND ARTS RELATED SCHOOLS

ACADEMIC SCH	YEAR GENDER	1979		1985		1989	
		M	F	M	F	M	F
<b>SCIENCE:</b>							
NATURAL SC		9	8	65	39	51	29
SC EDUCATION		1	2	16	62	32	121
APPLIED SC		2	1	20	8	7	1
PHARMACY		5	10	18	17	6	25
HOUSING B.P.		18	3	21	7	41	22
MEDICAL						37	40
COMPUTER						20	23
ENGINEERING						62	9
INDUSTRIAL TECH						10	11
MINERAL SC						19	3
<b>SUB-TOTAL</b>		35	24	140	133	285	284
%		59.3	40.7	51.3	48.7	50.1	49.9
<b>ARTS:</b>							
HUMANITIES		103	13	46	21	36	21
HUMANITIES EDU		5	10	4	33	36	73
SOCIAL SC		82	16	72	29	69	34
MANAGEMENT						45	29
COMMUNICATION						24	21
<b>SUB-TOTAL</b>		190	39	122	83	210	178
%		83.0	17.0	59.5	40.5	54.1	45.9

Source: University Sains Malaysia, 1989,  
Admission and Record Division.

## 5.5 DEVELOPMENT

In Table 5.2 we see that the composition of Malay students at the University of Science, Malaysia, increased from 1.8% in the 1969/70 admission year to 53.3% in 1984/85, an increase of 51.5%, or an average of 3.0% annually. A significant increase in Malay students occurred in the 1975/76 admission year, when their share of total student admissions was 54.1%, compared to 35.3% in the 1974/75 admission year, an increase of 18.8%. From the 1975/76 admission year until the 1985/86 admission year, the annual admission of Malay students was at an average of 53.6%, about 2.4% below the proportion of the Malay population in the country. In the earlier period, between the 1969/70 to 1974/75 admission years, the admission of Malay students was 32.4%. The lower percentages of Malay students at the University between 1971 to 1974 reflects the early stage of the implementation of preferential policy in education. Since 1975, when the policy was fully implemented, the admission of Malay students has increased to more than 50%.

In examining Table 5.20, we see that Malay graduates between 1972 and 1988 represented only 47%, while their admission in the same years was 49.6% (Table 5.2), a

difference of 2.6%. In the graduating classes of 1972 to 1977, 36.9% were Malay graduates, compared to 32.4% in the 1969/70 to 1974/75 admission years, an increase of 4.5%. However, in the graduation classes of 1978 to 1982, Malays comprised 48%, while their admission in 1975-1979 was 54.5%, a difference of 6.5%. In the graduation years of 1983-1988, the difference between graduation (47.8%) and admission (53.1%) was 5.3%. This shows that although there has been an average of 53.6% in admissions of Malay students since 1975, the output of Malay graduates over the years has been at an average of 49.2%, a difference of 4.4%. As an overall assessment of the preferential policy, it has brought about an increase in the admission of Malays at the university almost in proportion to the Malay population, but in output, Malay graduates have been proportionately underrepresented.

The Majid Report of 1971 made strong recommendations to increase the admission of Malay students in science related subjects. As seen in Table 5.31, there has been a significant increase in the distribution of Malay graduates in science related schools, from 33.1% in the periods of 1978-1989, to 57.9% in 1982-1988 and to 60% in 1989, an overall increase of 26.9%, compared to a decrease of 37.5% in arts related schools, from 77.9% in 1978-1980,

to 42.2% in 1982-1988, and 40.4% in the 1989 graduation classes. An increase in Malay graduates in science related schools was due to the establishment of new schools - - Medical, Computer, Engineering, Industrial Technology and Mineral Science - - which accounted for 9.1% of Malay students in 1982-88 and 24.4% in 1989. In Science Education, Malay student representation increased from 5.1% to 14.1% and to 16.6% in corresponding years, while in Housing, Building and Planning, the composition of Malay students was stable. In Natural Sciences, Pharmacy and Applied Sciences, the Malay representation decreased. Except for Humanities Education and the newly established schools of Management and Communications, the distribution of Malay graduates declined. In an overall distribution of Malay graduates between the science and arts related schools, there has been a significant increase in Malays in science schools, an indication of success in the implementation of the preferential policy in higher education.

Table 5.31

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
SCIENCE AND ARTS RELATED SUBJECTS, A COMPARISON:  
1978-80, 1982-88, 1989 (IN PERCENTAGES).

ACADEMIC SCH	1978-80	1982-88	1989
<b>SCIENCE:</b>			
NATURAL SC	11.0	16.4	8.4
SCIENCE EDUCATION	5.1	14.1	16.6
APPLIED SC	5.1	5.7	0.8
PHARMACY	5.3	5.9	3.2
HOUSING B. PLANNING	6.6	6.7	6.6
MEDICAL		4.3	8.0
COMPUTER		3.4	4.5
ENGINEERING		1.1	7.4
INDUSTRIAL TECH		0.3	2.2
MINERAL SCIENCE			2.3
<b>SUB-TOTAL</b>	<b>33.1</b>	<b>57.9</b>	<b>60.0</b>
<b>ARTS:</b>			
HUMANITIES	35.8	14.2	6.0
HUMANITIES EDU	6.4	7.9	13.0
SOCIAL SC	35.7	18.7	10.2
MANAGEMENT		0.8	7.1
COMMUNICATIONS		0.6	4.1
<b>SUB-TOTAL</b>	<b>77.9</b>	<b>42.2</b>	<b>40.4</b>

Source: Universiti Sains Malaysia, 1989,  
Admission and Record Division.

An additional significant factor in the development of higher education under the preferential policy is the gender composition of Malay students at the University of Science, Malaysia. During 1978-80, 76.3% of the Malay students were male, almost three times the number of Malay

females. During 1982-88, the composition of Malay females was more than half (38.7%) that of Malay males (61.3%) (Table 5.32). The gender distribution of Malay graduates narrowed to 48.3% females and 51.7% males in the graduating class of 1989, almost matching the gender distribution of the Malay population - - 50.3% female, 49.7% male (Malaysia, 1975). The development of education, especially higher education, since the implementation of the preferential policy in 1975, has improved Malay female representation at the University of Science Malaysia.

Table 5.32

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO GENDER  
(IN PERCENTAGES)

GENDER	1978-80	1982-88	1989
MALE	76.3	61.3	51.7
FEMALE	23.7	38.7	48.3

Source: Universiti Sains Malaysia, 1989,  
Admission and Record Division.

By 1984, there were 927 government non-residential secondary schools in Malaysia, an increase of 269 schools from 1972. The enrollment in that year was at 1,104,195, an increase of 7,984 from 1972. In addition, there were 27 government secondary residential schools, with a total enrollment of 12,115, and 10 MARA Junior Science residential colleges with 6,311 students. In examining the Malay graduates' previous secondary schools (Table 5.33), we see that from 1978 to 1980, 17.2% of the graduates were from residential schools, while 70.8% were from non-residentials, and 12% were educated in private secondary schools. In the graduating classes of 1982 to 1988, and in 1989, the proportion of graduates from residential schools increased to 43.2% and 59%, respectively. The graduates from non-residential government schools declined to 41.9% during 1982 to 1988, and to 30.8% in 1989. Those who studied in private schools also declined to 9.1% in 1982-1988, but increased to 10.1% in 1989. The rapid establishment of residential schools since 1972 has been a direct result of the recommendation of the Majid Report of 1971. In assessing the opportunities for higher education available to secondary education students, between 1974 to 1986, students from residential schools had greater opportunity over the years for admission to the University

of Science, Malaysia, than did those from non-residentials and private schools. Consequently, applications for admission to residential schools reached over 100,000 in 1987 (Residential School Division, Ministry of Education, Malaysia. Interview, July 7, 1988).

Table 5.33

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO TYPES OF SECONDARY SCHOOLS (IN PERCENTAGES).

ACADEMIC SCHOOLS	1978-80	1982-88	1989
RESIDENTIAL	17.2	43.2	59.0
NON-RESIDENTIAL	70.8	41.9	30.8
OTHERS	12.0	9.1	10.1
NO INFORMATION	-	5.8	-

Source: Universiti Sains Malaysia, 1989, Admission and Record Division.

The types of qualifications of Malay graduates at entry points from the 1974 to 1986 admission years are categorized in Table 5.34. Until the admission year of 1978, corresponding to the graduation year of 1982, admission to the University of Science, Malaysia was based on scores on the Higher School Certificate Examination (STPM) and diplomas of equivalent standing. During the



1978 to 1980 graduating years, 94.0% of the graduates were admitted with STPM scores, and 6.0% with other qualifications. Beginning with the 1979 admission year, students from the pre-university academic program, or the matriculation program, were admitted in addition to students with STPM and other accepted qualifications. In the 1982 to 1988 graduating classes, 39.6% of Malay graduates were from the matriculation program, which reduced the proportion of STPM students to 48.0%, and of others to 3.4%. In the 1989 graduating class, 57.3% of the Malay graduates were from the matriculation program, and 38.8% and 4.0% from STPM and others, respectively. In comparison with the development of government residential schools, which contributed 43.0% of Malay graduates in 1982 - 1988 and 59.0% in 1989, the matriculation program provided 40.0% of Malay graduates in 1982 - 1988, and 57.0% in 1989, an increase of 17.0% over the years. Thus, the residential schools and the matriculation program played an important role in preparing sufficiently qualified Malay students for higher education, especially in science related subjects.

Table 5.34

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
TYPES OF ACADEMIC QUALIFICATIONS AT ENTRY POINTS  
(IN PERCENTAGES)

ACADEMIC QUALIFICATION	1978-80	1982-88	1989
MATRIX	-	39.6	57.3
STPM	94.6	48.0	38.8
OTHERS	6.0	3.4	4.0
NO INFORMATION	-	8.8	-

Source: Universiti Sains Malaysia, 1989,  
Admission and Record Division.

## 5.6 IMPLICATIONS

The interventionist approach to social restructuring in Malaysian society is group-focused, in the sense that Malays and other indigenous peoples are seen as requiring special consideration in matters pertaining to entry into government-funded universities. In providing this special consideration, differences of a socioeconomic nature operating within the group do not come into play in the determination of eligibility (Tham, 1983: 156). Often the purported aims behind the shield of "special rights and privileges" to protect the "backwardness" of the Malays have been passed and accepted unquestionably without

clarifying the specific target groups, even within the "homogeneous" group of the Malay society. Frequently used rationales center around ethnic proportion comparisons - - in terms of more or less Malays versus non-Malays - - and hold that decreasing the gap in these proportions would indicate an improvement in the Malays' situation. This view reduces the complexity of the problem to simplicity, because it is not certain who among the Malays are consistently receiving the benefits of the preferential policy in higher education.

R.J.Havighurst (1958) noted that for education to be effective as an instrument for change in the status system, there must be adequate "openings" at the upper levels to absorb the beneficiaries of higher education. The importance of education as an instrument of social restructuring depends on the non-constancy of socioeconomic factors in determining success in education.

In Malaysia, education has in a sense become what Thurrow (1972: 79) has termed "a defensive necessity" in that as education becomes the primary determinant of economic status in society, people will strive to maintain or improve their educational levels simply to defend their current income positions. This is best exemplified in the willingness of many parents, especially non-Malays, to

have their children educated overseas, often at great expense. Within the Malay society, as many studies (B.L.Chan, 1975; Siti Zaharah, 1975; and T.J.Lian, 1976) show, there is evidence that Malays of good socioeconomic background or urbanites are better able to make use of facilities to acquire better representation in all educational institutions, particularly in elitist schools and prestigious courses.

The aforementioned situation would seem to support the observation in educational studies that socioeconomic background bears directly on educational achievement. More pertinent for consideration in the present study is the question of whether the spread of educational effects through the preferential policy in higher education will negate the objective of promoting socioeconomic mobility through education among Malays in the rural areas and in the lower economic strata.

## CHAPTER VI

## THE CASE STUDY

## INTRODUCTION

Inequalities in educational distribution can take diverse forms: inequalities between income or socio-occupational classes; between rural and urban areas; between regions; and between sexes. These diverse forms of educational inequalities will be analyzed to the extent that data are available. The main purpose of this chapter is to examine these forms and relate them to the outcomes of the preferential policy in higher education for 3784 Malay graduates of the University of Science, Malaysia. A comprehensive determination of these various forms of inequality or equality of educational process within Malay society includes:

- i participation, which occurs at points of entry,
- ii orientation, which occurs at various fields of study, and
- iii achievement, which occurs at various employment levels.

## 6.2 THE MALAY GRADUATES

The focus of this study is on 3784 Malay graduates in seven graduating classes, from 1982 to 1988. The distribution of the graduates in each graduating class, as shown in Table 6.1, was 414 (11%) in 1982, 465 (12%) in 1983, 507 (13%) in 1984, 478 (13%) in 1985, 551 (15%) in 1986, 649 (17%) in 1987 and 720 (19%) in 1988. These graduates were composed of 2,318 (61.3%) male and 1,468 (38.7%) females (Table 6.2). They graduated from 14 academic schools (Table 6.3), ranging from 619 (16.4%) at the School of Natural Sciences, to 708 (18.7%) in the School of Social Sciences, to 10 (0.3%) at the School of Industrial Technology. Of the total, 3,682 (97.3%) graduated from schools that had graduating classes for two years or more, and 102 (2.8%) were in the first graduating classes of the Schools of Engineering, Communication, Management and Industrial Technology. These graduates were admitted to the University from 1973 (2 or 0.1%) to 1978 (563 or 15%), and in 1984 (304 or 8%) (Table 6.4). Of them, 3,612 (95.5%) were admitted between 1978 and 1984. Their academic qualifications at entry point varied: 1,487 (39.6%) had matriculation, 1,815 (48%) had Higher School Certificates, 128 (3.4%) had diplomas and other

equivalent qualifications, and 332 (8.8%) were admitted under the off-campus program. Twelve graduates (0.3%) did not indicate their qualifications at entry point (Table 6.5). Information related to their previous secondary schools (high schools) shows that they attended three types of schools. There were 1,634 (43.2%) of graduates who had attended government residential schools, 1,584 (41.9%) government day-schools (non-residentials), and 345 (9.1%) private organized educational institutions (Table 6.6). There were 221 (5.8%) who did not indicate their previous high schools.

Table 6.1

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO GRADUATION YEAR

GRADUATION YEAR	VALUE	FREQ	PERCENT	VALID %	CUM %
1982	1	414	10.9	10.9	10.9
1983	2	465	12.3	12.3	23.2
1984	3	507	13.4	13.4	36.6
1985	4	478	12.6	12.6	49.3
1986	5	551	14.6	14.6	63.8
1987	6	649	17.2	17.2	81.0
1988	7	720	19.0	19.0	100.0
TOTAL		3784	100.0	100.0	

Table 6.2

## DISTRIBUTION OF MALAY GRADUATES ACCORDING TO GENDER

GENDER	VALUE	FREQ	PERCENT	VALID %	CUM %
MALE	1	2318	61.3	61.3	61.3
FEMALE	2	1466	38.7	38.7	100.0
TOTAL		3784	100.0	100.0	

Table 6.3

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO ACADEMIC SCHOOLS

ACADEMIC SCHOOLS	VALUE	FREQ	PERCENT	VALID %	CUM %
NATURAL SCIENCES	1	619	16.4	16.4	16.4
SC EDUCATION	2	533	14.1	14.1	30.4
APPLIED SC	3	214	5.7	5.7	36.1
PHARMACY	4	223	5.9	5.9	42.0
HOUSING	5	255	6.7	6.7	48.7
HUMANITIES	6	538	14.2	14.2	62.9
HUMAN EDUC	7	300	7.9	7.9	70.9
SOCIAL SC	8	708	18.7	18.7	89.6
MEDICAL	9	164	4.3	4.3	93.9
COMPUTER	10	128	3.4	3.4	97.3
ENGINEERING	11	40	1.1	1.1	98.4
COMMUNICATION	12	21	0.6	0.6	98.9
MANAGEMENT	13	31	0.8	0.8	99.7
INDUSTRIAL TECH	14	10	0.3	0.3	100.0
TOTAL		3784	100.0	100.0	



Table 6.4

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO YEAR OF ADMISSION

ADMISSION YEAR	VALUE	FREQ	PERCENT	VALID %	CUM %
1973	1	2	0.1	0.1	0.1
1975	3	4	0.1	0.1	0.2
1976	4	28	0.7	0.7	0.9
1977	5	138	3.6	3.6	4.5
1978	6	568	15.0	15.0	19.6
1979	7	483	12.8	12.8	32.3
1980	8	579	15.3	15.3	47.6
1981	9	549	14.5	14.5	62.1
1982	10	656	17.3	17.3	79.5
1983	11	473	12.5	12.5	92.0
1984	12	304	8.0	8.0	100.0
TOTAL		3784	100.0	100.0	

Table 6.5

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO TYPES OF ENTRY QUALIFICATION

ENT QUALIFICATION	VALUE	FREQ	PERCENT	VALID %	CUM %
NO INFO	0	12	0.3	0.3	0.3
MATRIX	1	1497	39.6	39.6	39.9
STPM/HSC	2	1815	48.0	48.0	97.8
OTHERS	3	128	3.4	3.4	91.2
OFF CAMPUS	4	332	8.8	8.8	100.0
TOTAL		3784	100.0	100.0	

Table 6.6

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO TYPES OF SECONDARY SCHOOLS ATTENDED

TYPES OF SCH	VALUE	FREQ	PERCENT	VALID %	CUM %
NO INFO	0	221	5.8	5.8	5.8
RESIDENTIAL	1	1634	43.2	43.2	49.0
NON RESIDENTIAL	2	1584	41.9	41.9	90.9
OTHERS	3	345	9.1	9.1	100.0
	TOTAL	3784	100.0	100.0	

Under information related to parental occupations, these graduates indicated 15 different groups of occupations (Tables 6.7 and 6.8). There were 545 (14.4%) graduates with high parental socioeconomic status, including 31 (0.8%) in the managerial and professional groups, 171 (4.5%) in the high administrative group, and 343 (4.5%) in the teaching profession. Within the middle socioeconomic status, there were 1,179 (31.2%) graduates, comprising 301 (8.0%) from business group, 407 (10.8%) pensioners, 184 (4.9%) police personnel, 38 (1.0%) in the armed forces, 56 (1.5%) in clerical and services, and 193

(5.1%) in the low administrative groups. There were 1,612 (42.6%) graduates whose parental occupations were in the low socioeconomic status category, constituting of 82 (2.2%) Federal Land Development Authority land-settlers, 100 (2.6%) rice cultivators, 216 (5.7%) rubber tappers, 48 (1.3%) fishermen, 585 (15.5%) farmers, and 581 (15.4%) unskilled laborers. There were 448 (11.8%) graduates who did not make their parental occupation information available.

From their residential addresses, 1,376 (36.4%) graduates indicated they came from urban areas, while 2,408 (63.6%) were from rural areas (Table 6.9). The information obtained also reflects distribution among 14 states in Malaysia. There are 2,175 (57.5%) graduates who came from developed states in Malaysia : Kuala Lumpur 198 (5.2%), Selangor 327 (8.6%), Perak 538 (14.2%), Penang 349 (9.2%), Johor 393 (10.4%), Negeri Sembilan 228 (6.0%) and Melaka 142 (3.8%). The other 1,069 (42.5%) graduates came from less developed states : Pahang 151 (4.0%), Kedah 517 (13.7%), Perlis 135 (3.6%), Kelantan 394 (10.4%), Trengganu 234 (6.2%), Sabah 55 (1.5%) and Sarawak 123 (3.3%) (Table 6.10).

Table 6.7

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO PARENTAL OCCUPATION GROUPS

PARENTAL OCCUPATION	VALUE	FREQ	PERCENT	VALID %	CUM %
NO INFO	0	448	11.8	11.8	11.8
MANAGERIAL/PROF	1	31	0.8	0.8	12.7
ADMIN HIGH	2	171	4.5	4.5	17.2
TEACHING	3	343	9.1	9.1	26.2
BUSINESS	4	301	8.0	8.0	34.2
PENSIONER	5	407	10.8	10.8	45.0
POLICE	6	184	4.9	4.9	49.8
ARM FORCES	7	38	1.0	1.0	50.8
CLERICAL	8	56	1.5	1.5	52.3
ADMIN LOW	9	193	5.1	5.1	57.4
SETTLERS	10	82	2.2	2.2	59.6
RICE CULTIVATORS	11	100	2.6	2.6	62.2
RUBBER TAPPERS	12	216	5.7	5.7	67.9
FISHERMEN	13	48	1.3	1.3	69.2
FARMERS	14	585	15.5	15.5	84.6
UNSKILLED LABORERS	15	581	15.4	15.4	100.0
TOTAL		3784	100.0	100.0	

Table 6.8

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO PARENTAL SOCIOECONOMIC STATUS

PARENTAL SES	VALUE	FREQ	PERCENT	VALID %	CUM %
NO INFO	0	448	11.8	11.8	11.8
HIGH	1	545	14.4	14.4	26.2
MIDDLE	2	1179	31.2	31.2	57.4
LOW	3	1612	42.6	42.6	100.0
TOTAL		3784	100.0	100.0	

Table 6.9

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO AREA OF RESIDENCE.

AREA OF RESIDENCE	VALUE	FREQ	PERCENT	VALID %	CUM %
URBAN	1	1376	36.4	36.4	36.4
RURAL	2	2408	63.6	63.6	100.0
	TOTAL	3784	100.0	100.0	

Table 6.10

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO STATE OF RESIDENCE

STATE OF RESIDENCE	VALUE	FREQ	PERCENT	VALID %	CUM %
KUALA LUMPUR	1	198	5.2	5.2	5.2
SELANGOR	2	327	8.6	8.6	13.9
PERAK	3	538	14.2	14.2	28.1
PENANG	4	349	9.2	9.2	37.3
JOHOR	5	393	10.4	10.4	47.7
NEGERI SEMBILAN	6	228	6.0	6.0	53.7
MELAKA	7	142	3.8	3.3	57.5
PAHANG	8	151	4.0	4.0	61.5
KEDAH	9	517	13.7	13.7	75.1
PERLIS	10	135	3.6	3.6	78.7
KELANTAN	11	394	10.4	10.4	89.1
TRENGGANU	12	234	6.2	6.2	95.3
SABAH	13	55	1.5	1.5	96.7
SARAWAK	14	123	3.3	3.3	100.0
	TOTAL	3784	100.0	100.0	

### 6.3 PARTICIPATION

After study of campus life in 1970, the Majid Report (1971) contained an explicit recommendation to admit Malay students from rural areas. It was proper then to make such a recommendation, for not only was the proportion of Malay students small compared to non-Malays at the University of Malaya (see Table 2.2), but also 76% of Malays were in rural areas, and poor. Therefore, it was recommended that in the course of the preferential treatment program over the years, the demographic should reflect a growing proportion of rural Malays in higher education.

The Third Malaysia Plan (1976), pursuing further the goal of restructuring society under the New Economic Policy, contained a strong policy statement to narrow the gap in higher educational opportunities between rich and poor Malays (Malaysia, 1976: 391). The Cabinet Committee Report on Education (1979) was formed under the chairmanship of the Minister of Education with the objective of reviewing the national educational policy and making recommendations. In its review of the development of higher education, the Committee made a specific recommendation to improve educational opportunities for higher educational attainments among Malay youths from

disadvantaged groups - - that is, of low socioeconomic status.

Analyzing the graduates of 1982-1988 at the University of Science, Malaysia in light of these policy recommendations, the discussion in this section is divided into two sub-topics : demographics and socioeconomic status.

#### 6.3.1 DEMOGRAPHICS

In analyzing the 3,784 Malay graduates in the graduating classes from 1982 to 1988, we see in Table 6.11 that 1,376 (36.4%) of them resided in urban areas, while 2,408 (63.6%) were rural, an advantage of 1,032 (27.2%) for graduates from rural areas. In comparison to the distribution of the Malay population in 1980 and 1985, when 75% and 70% were in rural areas and 25% and 30% in urban areas, the demographic composition of Malay graduates from 1982 to 1988 was as follows. The rural population was underrepresented by 11.4% in 1980 and by 6.4% in 1988. Upon closer examination of the demographic proportions in each graduation year, we see in the table that the representation of rural Malays declined from 66.2% in 1982 to 55.2% in 1985, but increased to 67.3% and 70.3% in 1987 and 1988, respectively. On the other hand,

Malays from urban areas gained better representation, from 33.8% in 1982 to 44.8% in 1985. However, after 1985, the composition of Malay graduates from urban areas declined, dropping to 29.7% by 1988. In the graduating classes from 1985 to 1988, the number of Malay graduates from urban areas was almost constant, at 214 (1985), 217 (1986), 212 (1987) and 214 (1988), while there was a significant increase in the number of Malay graduates from rural areas, at 264 (1985), 334 (1986), 437 (1987) and 506 (1988). The increase in graduates from rural areas over the period was 92%, or 242 graduates. Between 1982 and 1985, there was a 53% (74) increase of Malay graduates from urban areas, and a decline of 4% (10) in graduates from rural areas. During the graduating years of 1982 to 1988, there was a difference of 1,032 between Malay graduates from rural and urban areas, an average advantage of 147 graduates from rural residences.



Table 6.11

## DEMOGRAPHIC DISTRIBUTION OF MALAY GRADUATES, 1982-1988

DEMOG	1982	1983	1984	1985	1986	1987	1988	TOTAL
URBAN 1	140	176	203	214	217	212	214	1736
	10.2	12.8	14.8	15.6	15.8	15.4	15.6	36.4
	33.8	37.8	40.0	44.8	39.4	32.7	29.7	
RURAL 2	274	289	304	264	334	437	506	2408
	11.4	12.0	12.6	11.0	13.9	18.1	21.0	63.6
	66.2	62.2	60.0	55.2	60.6	67.3	70.3	
TOTAL	414	465	507	478	551	649	720	3784
	10.9	12.3	13.4	12.6	14.6	17.2	19.0	100.0

When the demographic pattern and the graduates' secondary schools are cross-tabulated by qualifications at entry points (Tables 6.12, 6.13 and 6.14), we see that out of 1,497 (39.6%) graduates who were from the matriculation program, 555 (37.1%) and 942 (62.9%) were from urban and rural areas, respectively. Out of 1,815 (48%) graduates with Higher School Certificates (STFM), 624 (34.4%) graduates resided in urban areas, and 1,191 (65.6%) in rural areas. There were 332 (8.8%) graduates who were admitted under the off-campus program, of which 129 (38.9%) and 203 (61.1%) resided in urban and rural areas, respectively. In addition, there were 128 (3.4%) graduates admitted with other academic qualifications, of which 65 were from urban areas, and 63 from rural areas. Twelve graduates did not make their place of residence available (Table 6.12). Except for admission under the off-campus program, graduates from rural areas had an advantage over the urban graduates. There were 1,179 (85.6%) graduates who resided in urban areas and were admitted under the matriculation program (40.3%) and Higher School Certificate (45.3%), while out of 2,133 (88.6%) who resided in rural areas, 942 (39.1%) were admitted under the matriculation program, and 1,191

(49.5%) had STPM. These two types of academic programs provided the major avenues for admission to the university, and graduates from rural areas enjoyed a numerical advantage of 954 (80.9%).

In distributing the graduates from urban areas according to the types of secondary schools they previously attended, it is seen in Table 6.13 that 606 (44.0%) of the graduates were from residential schools, and 543 (39.5%) were from non-residential schools. There were 135 (9.8%) who attended other types of schools, and 92 (6.7%) who did not make the information available. When data on types of previous schools were cross-tabulated with data on types of academic qualification at entry point, it was found that 523 (94.2%) of those who were admitted under the matriculation program were from residential schools, and 25 (4.5%) from non-residentials. Of 624 graduates who were admitted with STPM, 72 (11.5%) had attended residential schools, and 64 (10.3%) had attended other institutions. Sixty-five (50.4%) graduates admitted from the off-campus program had secondary education in non-residential schools, and 8 (6.2%) in residentials. Overall, graduates from residential schools enjoyed a numerical advantage of 63 (11.6%) over those from non-residential schools.

Table 6.12

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
TYPES OF ACADEMIC ENTRY QUALIFICATIONS AND DEMOGRAPHIC

ENTRY QUALIFICATION		URBAN 1	RURAL 2	TOTAL
NO INFO	0	3	9	12
		25.0	75.0	0.3
		0.2	0.4	
MATRIX	1	555	942	1497
		37.1	62.9	39.6
		40.3	39.1	
STPM	2	624	1191	1815
		34.4	65.6	48.0
		45.3	49.5	
OTHERS	3	65	63	128
		50.8	49.2	3.4
		4.7	2.6	
OFF CAMPUS	4	129	203	332
		38.9	61.1	8.8
		9.4	8.4	
TOTAL		1376	2408	3784
		36.4	63.6	100.0

In analyzing the distribution of graduates from rural areas according to types of secondary schools, it is seen in Table 6.14 that 1,041 (43.2%) attended non-residential schools, and 1,028 (42.7%) attended residential schools, a

difference of 13 (0.5%). There were 210 (8.7%) who had secondary education at other educational institutions. From 1,028 graduates from residential schools, 881 (85.7%) were admitted to the university under the matriculation program, and 126 (12.3%) with STPM. Of those from non-residentials, 49 (4.7%) and 869 (83.5%) were admitted from the matriculation and STPM programs, respectively. The off-campus program provided 120 (11.5%) graduates.

The residential and non-residential schools contributed 3,218 (85%) of the Malay graduates, of which 1,638 (50.8%) were from residential and 1,584 (49.2%), from non-residential schools. Among the graduates from urban areas, 63 (4.5%) more graduates attended residential schools than non-residentials, while among the graduates from rural areas the difference was only 0.5%, reflecting an almost even distribution.

The distribution of graduates in various academic schools according to their demographic pattern is shown in Table 6.15. Here we see in all schools, graduates from rural areas were better represented than graduates from urban areas. In the four most populated schools, the Natural Sciences, the Science (Education), the Humanities and the Social Sciences, which accounted for 63.3% (2,399) of Malay graduates, there were 36.6% (877) from urban

areas, and 1,520 (63.4%) from rural areas, a ratio of 1:2. In the schools of Medical Sciences, Computers and Engineering, the distribution of graduates from urban and rural areas was 41.9% and 58.1% respectively; this ratio of 2:3, was better than in the former schools. When the academic schools were reduced to science and arts related subjects and cross-tabulated with the demographic pattern of the graduates (Table 6.16), the proportions of graduates from urban and rural areas were proportionately distributed into science and arts schools at 40% : 60%. There were 59% graduates from urban areas in science, and 41% in arts, while graduates from rural areas registered at 57% and 43%, respectively. The proportions of graduates from urban and rural areas in science and arts were 37% and 63%, and 35% and 65%, respectively, reflecting a similar pattern.

Table 6.13

DISTRIBUTION OF MALAY GRADUATES FROM URBAN AREAS  
ACCORDING TO TYPES OF SECONDARY SCHOOLS AND TYPES OF  
ACADEMIC QUALIFICATIONS AT ENTRY POINT

PREV SCH	ENTRY QUALIFICATION					TOTAL
	NO INFO	MATRIX	STPM	OTHERS	OFF CAM	
NO INFO	1	4	38	-	49	92
	1.1	4.3	41.3		53.3	6.7
	33.3	0.7	6.1		38.0	
RESID	-	523	72	3	8	606
		86.3	11.9	0.5	1.3	44.0
		94.2	11.5	4.6	6.2	
NON-RESID	-	25	450	3	65	543
		4.6	82.9	0.6	12.0	39.5
		4.5	72.1	4.6	50.4	
OTHERS	2	3	64	59	7	135
	1.5	2.2	47.4	43.7	5.2	9.8
	66.7	0.5	10.3	90.8	5.4	
TOTAL	3	555	624	65	129	1376
	0.2	40.3	45.3	4.7	9.4	100.0

Table 6.14

DISTRIBUTION OF MALAY GRADUATES FROM RURAL AREAS  
ACCORDING TO TYPES OF SECONDARY SCHOOLS AND TYPES OF  
ACADEMIC QUALIFICATION AT ENTRY POINT

PREV SCH	ENTRY QUALIFICATION					TOTAL
	NO INFO	MATRIX	STPM	OTHERS	OFF CAM	
NO INFO	5	8	65	1	50	129
	3.9	6.2	50.4	0.8	38.8	5.4
	55.6	0.8	5.5	1.6	24.6	
RESIDENTIAL	3	881	126	4	14	1028
	0.3	85.7	12.3	0.4	1.4	42.7
	33.3	93.5	10.6	6.3	6.9	
NON-RESID	1	49	869	2	120	1041
	0.1	4.7	83.5	0.2	11.5	43.2
	11.1	5.2	73.0	3.2	59.1	
OTHERS	-	4	131	56	19	210
		1.9	62.4	26.7	9.0	8.7
		0.4	11.0	88.9	9.4	
TOTAL	9	942	1191	63	203	2408
	0.4	39.1	49.5	2.6	8.4	100.0



Table 6.15

DEMOGRAPHIC DISTRIBUTION OF MALAY GRADUATES  
 ACCORDING TO ACADEMIC SCHOOLS (1982 - 1988)

ACADEMIC SCH	VALUE	DEMOGRAPHIC		TOTAL
		URBAN 1	RURAL 2	
NATURAL SCIENCES	1	247	372	619
		39.9	60.1	16.4
		18.0	15.4	
SCIENCE EDUCATION	2	167	366	533
		31.3	68.7	14.1
		12.1	15.2	
APPLIED SCIENCES	3	72	142	214
		33.6	66.4	5.7
		5.2	5.9	
PHARMACY	4	95	128	223
		42.6	57.4	5.9
		6.9	5.3	
HOUSING	5	91	164	255
		35.7	64.3	6.7
		6.6	6.8	
HUMANITIES	6	182	356	538
		33.8	66.2	14.2
		13.2	14.8	
HUMANITIES (EDU)	7	80	220	300
		26.7	73.3	7.9
		5.8	9.1	

Table 6.15 (Continued)

ACADEMIC SCH	VALUE	DEMOGRAPHIC		TOTAL
		URBAN 1	RURAL 2	
SOCIAL SCIENCE	8	281	427	708
		39.7	60.3	18.7
		20.4	17.7	
MEDICAL	9	79	85	164
		48.2	51.8	4.3
		5.7	3.5	
COMPUTERS	10	49	79	128
		38.3	61.7	3.4
		3.6	3.3	
ENGINEERING	11	11	29	40
		27.5	72.5	1.1
		0.8	1.2	
COMMUNICATION	12	7	14	21
		33.3	66.7	0.6
		0.5	0.6	
MANAGEMENT	13	11	20	31
		35.5	64.5	0.8
		0.8	0.8	
INDUSTRIAL TECH	14	4	6	10
		40.0	60.0	0.3
		0.3	0.2	
TOTAL		1376	2408	3784
		36.4	63.6	100.0

Table 6.16

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO DEMOGRAPHIC  
AND SCIENCE AND ARTS RELATED SCHOOLS

ACADEMIC SCH	VALUE	DEMOGRAPHIC		TOTAL
		URBAN 1	RURAL 2	
SCIENCE	1	815	1371	2186
		37.3	62.7	57.8
		59.2	56.9	
ARTS	2	561	1037	1598
		35.1	64.9	42.2
		40.8	43.1	
	TOTAL	1376	2408	3784
		36.4	63.6	100.0

- Note: i. Science related schools composed of Schools of Natural Sciences, Science Education, Applied Sciences, Pharmacy, Housing, Medical, Computer, Engineering, and Industrial Technology.
- ii. Arts related schools composed of Schools of Humanities, Humanities (Education), Social Sciences, Communication, and Management.

In examining the demographic pattern of graduates at the science and arts related schools (Table 6.17), it is seen that over the years, the graduates from the urban areas increased steadily each year, from 9.1% in 1982 to 14.8% in 1985, and 17.4% in 1988. However, in arts related schools, the number of graduates from urban areas decreased after the 1986 graduation year, from 16.6% in

1985 to 14.6% in 1986, and to 12.8% in 1988. On the other hand, graduates from rural areas increased significantly in 1986, from 10.8% in 1985 to 14.9% in 1986, and to 19.5% in 1988 in arts related schools, while in sciences, the increase was from 11.0% in 1985 to 13.1% in 1986, and to 22.2% in 1989. In comparison, there was a significant increase in graduates from rural areas in both science and arts related subjects after the 1986 graduation year in comparison to the 1981 admission year, from 13.9% to 21.0%, while for urban students, the change was 15.8% in 1986 to 15.6%, a decrease of 0.2%.

The distribution of these graduates according to their states of residence is shown in Table 6.18. The states of Perak, Kedah, Kelantan and Selangor were better represented than other states. When the distribution is cross-tabulated with demographic data, the states of Penang, Selangor, and Federal Territory of Kuala Lumpur, provided a larger proportion of graduates from urban areas, while the states of Perak, Kedah and Johor had a larger representation among the graduates from rural areas. When these states are divided according to the status of developed and less developed, based on socioeconomic development (Tan, 1980), it is seen in Table 6.19 that 2,175 (57.5%) graduates were from developed

states, and 1,609 (42.5%) from less developed states. Among the graduates from urban areas, 934 (67.9%) resided in developed states, and 442 (32.1%) in less developed, while 1,241 (51.5%) and 1,167 (48.5%) rural graduates were from developed and less developed states respectively. Although in both developed and less developed states the distribution of graduates favored rural areas, the ratio in developed states of urban to rural students was about 2:3 (43% : 57%), while in less developed states it was almost 1:3 (28% : 73%). In comparison to the urban/rural population distribution in the developed states, which was 62% urban and 38% rural (Malaysia, 1980), and to that in the less developed states, which was 48% urban and 52% rural, the proportions of graduates in both developed and less developed states very significantly favored the rural areas.

The gender distribution according to demographic pattern shown in Table 6.20 reveals that in both urban and rural areas, there were more male graduates than females. In urban areas, the difference between the male and female graduates is small, 7.4%, but in rural areas the difference is very significant, 31.2%. In this case, the males from rural areas had a great advantage over females, when compared to the gender distribution of the overall

Malay population, which was 49.7% males and 50.3% females. Among the male graduates, 31.9% came from urban areas, and 68.1% from rural areas, a difference of 36.2%. Among the female graduates, the difference between urban and rural students was 13%, the higher percentage being from rural areas.

Table 6.17

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
DEMOGRAPHIC, ACADEMIC SCHOOLS AND GRADUATION YEARS.

DEMOG/ ACAD SCH	GRADUATION YEAR							TOTAL
	1982	1983	1984	1985	1986	1987	1988	
URBAN								
SCIENCE	74 9.1	96 11.8	110 13.5	121 14.8	135 16.6	137 16.8	142 17.4	815
ARTS	66 11.8	80 14.3	93 16.6	93 16.6	82 14.6	75 13.4	72 12.8	561
SUB TOTAL	140 10.2	176 12.8	203 14.8	214 15.6	217 15.8	212 15.4	214 15.6	1376
RURAL								
SCIENCE	133 9.7	181 13.2	163 11.9	152 11.1	180 13.1	258 18.8	304 22.2	1371
ARTS	141 13.6	108 10.4	141 13.6	112 10.8	154 14.9	179 17.3	202 19.5	1037
SUB TOTAL	274 11.4	289 10.0	304 12.6	264 11.0	334 13.9	437 18.1	506 21.0	2408

Table 6.18

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
STATE OF RESIDENCE AND DEMOGRAPHIC PATTERNS.

STATE OF RESIDENCE	VALUE	DEMOG URBAN 1	RURAL 2	TOTAL
KUALA LUMPUR	1	198 100.0 14.2		198 5.2
SELANGOR	2	198 60.6 14.4	129 39.4 5.4	327 8.6
PERAK	3	159 29.6 11.6	379 70.4 15.7	538 14.2
PENANG	4	241 69.1 17.5	108 30.9 4.5	349 9.2
JOHOR	5	86 21.9 6.3	307 78.1 12.7	393 10.4
NEGERI SEMBILAN	6	45 19.7 3.3	183 80.3 7.6	228 6.0
MELAKA	7	9 6.3 0.7	133 93.7 5.5	142 3.8

Table 6.18 (Continued)

STATE OF RESIDENCE	VALUE	DEMOG URBAN 1	RURAL 2	TOTAL
PAHANG	8	43 28.5 3.1	108 71.5 4.5	151 4.0
KEDAH	9	149 28.8 10.8	368 71.2 15.3	517 13.7
PERLIS	10	24 17.8 1.7	111 82.2 4.6	135 3.6
KELANTAN	11	95 24.1 6.9	299 75.9 12.4	394 10.4
TRENGGANU	12	65 27.8 4.7	169 72.2 7.0	234 6.2
SABAH	13	12 21.8 0.9	43 78.2 1.8	55 1.5
SARAWAK	14	54 43.9 3.9	69 56.1 2.9	123 3.3
TOTAL		1376 36.4	2408 63.6	3784 100.0



Table 6.19

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
STATE OF RESIDENCE STATUS BY DEMOGRAPHIC PATTERN.

STATE OF RESIDENCE	VALUE	URBAN 1	RURAL 2	TOTAL
DEVELOPED	1	934	1241	2175
		42.9	57.1	57.5
		67.9	51.5	
LESS DEVELOPED	2	442	1167	1609
		27.5	72.5	42.5
		32.1	48.5	
TOTAL		1376	2408	3784
		36.4	63.6	100.0

- Note: i Developed states consist of Kuala Lumpur, Selangor, Perak, Penang, Johor, Negeri Sembilan and Melaka.  
ii Less developed states consist of Pahang, Kedah, Perlis, Kelantan, Trengganu, Sabah and Sarawak.

Table 6.20

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO DEMOGRAPHIC AND GENDER

DEMOGRAPHIC	VALUE	MALE 1	FEMALE 2	TOTAL
URBAN	1	739	637	1376
		53.7	46.3	36.4
		31.9	43.5	
RURAL	2	1579	829	2408
		65.6	34.4	63.6
		68.1	56.5	
TOTAL		2318	1466	3784
		61.3	38.7	100.0

When the demographic pattern of graduates is cross-tabulated against parental socioeconomic status (Table 6.21), it is seen that 1,612 (42.6%) of the graduates were from low economic status families, while 1,179 (31.2%) and 545 (14.4%) were from middle and high status, respectively. There were 448 (11.8%) graduates who did not make their information available.

Table 6.21

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
DEMOGRAPHIC AND PARENTAL SOCIOECONOMIC STATUS.

DEMOG	VALUE	PARENTAL SES				TOTAL
		NO INFO 0	HIGH 1	MIDDLE 2	LOW 3	
URBAN	1	206	327	587	256	1376
		15.0	23.8	42.7	18.6	36.4
		46.0	60.0	49.8	15.9	
RURAL	2	242	218	592	1356	2408
		10.0	9.1	24.6	56.3	63.6
		54.0	40.0	50.2	84.1	
TOTAL		448	545	1179	1612	3784
		11.8	14.4	31.2	42.6	100.0

In the overall demographic pattern of Malay graduates from 1978 to 1989, corresponding to the 1974 to 1985 admission years, under the preferential policy treatment, the proportion of graduates from rural areas increased from 23.7% in the 1978-1980 graduation years, to 63.6% in 1982-1988, almost 40.0%. On the other hand, the proportion of graduates from urban areas decreased by 16.0% over the period. However, in the 1989 graduation year the proportion of graduates from urban areas resembled the pattern in the 1978-1980 graduation years, when graduates from urban areas had an advantage of almost 5.0% (Table 6.22). The increased proportion of graduates from urban areas could be related to the process of urbanization and the trend of migration from rural to urban areas in search of employment. Towns with populations of 10,000 and over are being defined as "urban." The censuses of 1947, 1957 and 1970 showed a steady increase in the number of urban towns, from 22 in 1947 and 38 in 1957 to 49 in 1970 (Malaysia, 1971). Just as economic development and growth have largely been responsible for changes in trends in population size and growth in Malaysia, economic factors have also been responsible for trends in population distribution in the country. The 1970 census of the

Malaysian population indicated that there were 954,000 lifetime interstate migrants, a term which refers to persons who were counted in a state other than their state of birth. These migrants constituted no less than 11.0% of the total population in 1970. In 1980, 16.3% of the total population were migrants from less developed states to developed states (Malaysia, 1970 and 1980 Population Census). Harban Singh (ESCAP, 1986), in his study of the Internal Migration in the 1980 population census, shows that there was a significant increase in intrastate and interstate migration between 1970 and 1980. In 1970, there were 1,968,400 intrastate migrants, but in 1980 this figure increased to 2,392,800. Of the interstate migrants, there were 754,700 in 1970, and 1,532,400 in 1980. Among the main reasons given for migration in 1980 were: on work transfer (10%); looking for job (7%); job offered (8%); following family (40%); marriage (14%); and education (4%) (Harban Singh, 1986, Table 43, p.43). However, the demographic distribution of graduates since 1986 (Table 6.11) shows a steady increase in the number of graduates from rural areas, from 60.6% in 1986 to 70.3% in the 1988 graduation year. The graduates from urban areas declined from 39.4% to 29.7% in the respective years. Additional data on graduation in 1990 may provide an

explanation for the change in the demographic pattern in 1989. In the 1983 and 1985 graduation years, the demographic pattern showed a reversed proportion for graduation from rural areas. In 1983, the rural graduates declined from 66.2% in 1982 to 62.2% in 1983, and in 1985 it declined to 55.2%, from 60.0% in 1984 (see Table 6.11).

Table 6.22

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
DEMOGRAPHIC PATTERN - A COMPARISON 1978-1980,  
1982-1988, 1989 (IN PERCENTAGE).

DEMOGRAPHIC	1978-1980	1982-1988	1989
URBAN	52.4	36.4	52.5
RURAL	47.6	63.6	47.5

Source: Universiti Sains Malaysia, 1989,  
Admission and Record Division.

Another characteristic related to the processes of urbanization and migration is the increased proportion of graduates from developed states in 1982-1988 (Table 6.23). During those years, graduates from developed states increased from 52.8% during the 1978-1980 graduation years to 57.5% in 1982-1988. On the other hand, the proportion of graduates from less developed states decreased from 47.2% to 42.5% during the same period. In the 1989 graduation year, the proportion of graduates from developed states declined to 54.3%, and in less developed states, it increased to 45.7%, an indication of improvement in representation from less developed states. However, over the years, from the 1978 to 1989 graduation years, the developed states had an advantage in graduate representation over the less developed states.

Table 6.23

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO STATES  
OF RESIDENCE STATUS: A COMPARISON (IN PERCENTAGES)

STATES	1978-1980	1982-1988	1989
DEVELOPED	76.3	61.3	51.7
LESS DEVELOPED	23.7	38.7	48.3

Source: Universiti Sains Malaysia, 1989.  
Admission and Record Division.

### 6.3.2 SOCIOECONOMIC STATUS

In Table 6.24 it is seen that out of 3,784 graduates in the 1982-1988 graduation years, 545 (14.4%) were from high socioeconomic status families, and 1,179 (31.2%) and 1,612 (42.6%) were from middle and low socioeconomic status families, respectively. There were 448 (11.8%) graduates who did not make their information available. Data on employment by occupation in 1978 (Malaysia, 1980) show that among the Malay population there were 6.7% in high status occupations, and 19.4% and 74.0% in middle and low status occupational rankings, respectively. In comparison, graduates from high and middle socioeconomic status were overrepresented by 7.7% and 11.8%, respectively. Graduates from low socioeconomic status were underrepresented by 31.4%. However, a closer examination of the proportion of graduates in each graduation year, shows that graduates from all class status experienced changes. Within the high status, the proportion of graduates increased from 11.4% in 1982 to 12.9% in 1989. In the middle status, the proportion declined from 36.5% in 1982 to 26.3% in 1989. On the other hand, the low class status experienced a significant increase, from 41.3% in 1982 to 48.8% in 1989. In the 1987 and 1988 graduation years, there were sharp declines in the high and middle

status groups, from 15.1% to 12.9%, and from 34.4% to 26.3%, respectively. The low status group gained by 10.0%, from 38.8% to 48.8%. A similar pattern also occurred in the 1982 and 1983 graduation years, when both high and middle status groups experienced declines in their proportions of graduates, while within the low status, the proportion increased by 7.5%. In 1984, 1985 and 1986, the high and middle status groups experienced an increase in representation by 3.0%, while the low status lost 8.0%.

When parental socioeconomic status is distributed into types of occupation (Table 6.25), it is seen that within the high status group, 9.1% (343) graduates were from the teaching profession, while 4.5% (171) and 0.8% (31) were from administrators in high positions, and managerial and professional groups, respectively. Within the middle class status, pensioners (10.8%) and the business group (8.8%) had larger proportions of graduates. Students whose parents work in lower positions in administration and the police force constituted 5.0%, while those with parents in clerical occupations and the armed forces made up the other 2.5% of the middle status group. Farmers and laborers provided 15.5% and 15.4%, respectively, the largest proportion among the occupational groups. Rubber tappers and rice cultivators



made up 5.7% and 2.6%. Settlers under the Federal Land Development Authority and fishermen made up the other 2.2% and 1.3%.

Table 6.24

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL SOCIOECONOMIC STATUS, BY YEAR OF GRADUATION

PARENTAL SES	YEAR OF GRADUATION							TOTAL
	1982	1983	1984	1985	1986	1987	1988	
NO INFO	45	48	59	57	76	76	87	448
	10.0	10.7	13.2	12.7	17.0	17.0	19.4	11.8
	10.9	10.3	11.6	11.9	13.8	11.7	12.1	
HIGH	47	50	73	87	97	98	93	545
	8.6	9.2	13.4	16.0	17.8	18.0	17.1	14.4
	11.4	10.8	14.4	18.2	17.6	15.1	12.9	
MIDDLE	151	140	154	141	181	223	189	1179
	12.8	11.9	13.1	12.0	15.4	18.9	16.0	31.2
	36.5	30.1	30.4	29.5	32.8	34.4	26.3	
LOW	171	227	221	193	197	252	351	1612
	10.6	14.1	13.7	12.0	12.2	15.6	21.8	42.6
	41.3	48.8	43.6	40.4	35.8	38.8	48.8	
TOTAL	414	465	507	478	551	649	720	3784
	10.9	12.3	13.4	12.6	14.6	17.2	19.0	100.0

Between the 1982 and 1988 graduation years, parents in the teaching profession had a better representation in each year, from 7.0% in 1982 to 7.8% in 1988, while high positioned administrators, and managers and professionals experienced a smaller increase, from 3.9% to 4.0%, and from 0.5% to 1.1%, respectively. On the other hand, all occupational groups in the middle status group experienced a declining representation between 1982 and 1989, except for armed forces, which gained by 0.6%. Pensioners, who were at 12.6% in 1982, decreased to 10.0% in 1988, while the business group declined from 10.4% to 6.3% in the respective years. Among the parents who made up the low occupational status groups, except for farmers and rice cultivators, other groups had increased proportions in each graduation year. Between 1982 and 1988, graduates whose parents were farmers and rice cultivators, declined by just 0.4% and 0.6%, respectively. Students from the labor group experienced the largest increase, from 13.8% in 1982 to 18.2% in 1988, an increase of 4.4%. Over the years, as student enrollment at the University of Science, Malaysia increased, not only did the proportion of the low socioeconomic status group increase, but each occupational group experienced an increase in representation in each graduation year.

Analysis of the types of secondary schools that these graduates previously attended (Table 6.26) shows that 18.4% of graduates from high socioeconomic status families were from residential schools, compared to 31.2% and 40.8% from middle and low socioeconomic status, respectively. In non-residential schools, the distributions were: 11.3% high; 31.3% middle; and 44.4% low. Comparing residential and non-residential schools, 55.0% of graduates from high socioeconomic status were from residential, and 32.8% from non-residential, while in the middle and low socioeconomic status groups, the distribution between these two types of schools was similar, at an average of 42.0%. Thus, graduates from high socioeconomic status had 22.2% higher representation in residential than in non-residential schools. Since, there was a greater correspondence between residential schools and admission to the university, 43.2% compared to 41.9% of admissions from non-residential schools, the high socioeconomic status group had an advantage over the middle and the lower groups in admission to the university.

The distribution of graduates from other educational institutions shows that graduates from the low socioeconomic status group made up 41.2%, while 30.4% and 14.2% were from middle and high status groups,

respectively. These groups contributed 9.0% of the graduates from each socioeconomic status.

When the socioeconomic status variable is cross-tabulated against the entry qualification variable (Table 6.27), it is seen that 50% of places in matriculation program were occupied by graduates from high (19.1%) and middle (31.0%) socioeconomic status. The graduates from the low socioeconomic status group represented 40%. For the Higher School Certificate (STPM) the graduates from the low status group comprised 45.8%, compared to 11.7% and 31.7% for those in high and middle status groups, respectively. The distribution of graduates according to type of academic qualification at the admission level shows that 52.5% of graduates with high socioeconomic status had their education in the matriculation program, compared to 38.9% in Higher School Certificate classes. Among the graduates with middle and low socioeconomic status, 48.8% and 51.6% had the Higher School Certificate, compared to 39.4% and 36.9%, respectively, in the matriculation program. For the other types of qualification and the off-campus program, 8.8% graduates were from high socioeconomic status, while 11.7% and 11.4% were from middle and low status groups.

The relationship between residential schools and the matriculation program on the other hand, and non-residential schools and the Higher School Certificate on the other (Table 6.14) shows that there were 881 (85.7%) graduates with the first combination, and 869 (83.5%) with the second. Thus, in terms of educational opportunity for higher education, children from high socioeconomic status had a greater chance to be admitted to the residential schools, the matriculation program and the university, compared to those in the low socioeconomic status.

Table 6.25

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL OCCUPATION AND GRADUATION YEAR.

PARENTAL OCCUP	GRADUATION YEAR							TOTAL
	1982	1983	1984	1985	1986	1987	1988	
NO INFO	45	48	59	57	76	76	87	448
	10.0	10.7	13.2	12.7	17.0	17.0	19.4	11.8
	10.9	10.3	11.6	11.9	13.8	11.7	12.1	
MAN/PROF	2	3	5	5	2	6	8	31
	6.5	9.7	16.1	16.1	6.5	19.4	25.8	0.8
	0.5	0.6	1.0	1.0	0.4	0.9	1.1	
ADMIN HIGH	16	20	20	22	36	28	29	171
	9.4	11.7	11.7	12.9	21.1	16.4	17.0	4.5
	3.9	4.3	3.9	4.6	6.5	4.3	4.0	
TEACHING	29	27	48	60	59	64	56	343
	8.5	7.9	14.0	17.5	17.2	18.7	16.3	9.1
	7.0	5.8	9.5	12.6	10.7	9.9	7.8	
BUSINESS	43	38	36	31	44	64	45	301
	14.3	12.6	12.0	10.3	14.6	21.3	15.0	8.0
	10.4	8.2	7.1	6.5	8.0	9.9	6.3	
PENSIONER	52	42	57	50	59	75	72	407
	12.8	10.3	14.0	12.3	14.5	18.4	17.7	10.8
	12.6	9.0	11.2	10.5	10.7	11.6	10.0	
POLICE	24	34	23	26	31	26	20	184
	13.0	18.5	12.5	14.1	16.8	14.1	10.9	4.9
	5.8	7.3	4.5	5.4	5.6	4.0	2.8	
ARMED FORCES	2	3	6	5	10	4	8	38
	5.3	7.9	15.8	13.2	26.3	10.5	21.1	1.0
	0.5	0.6	1.2	1.0	1.8	0.6	1.1	
CLERICAL	7	5	11	7	8	9	9	56
	12.5	8.9	19.6	12.5	14.3	16.1	16.1	1.5
	1.7	1.1	2.2	1.5	1.5	1.4	1.3	

Table 6.25 (Continued)

PARENTAL OCCUP	GRADUATION YEAR							TOTAL
	1982	1983	1984	1985	1986	1987	1988	
ADMIN LOW	23	18	21	22	29	45	35	193
	11.9	9.3	10.9	11.4	15.0	23.3	18.1	5.1
	5.6	3.9	4.1	4.6	5.3	6.9	4.9	
SETTLERS	7	8	9	7	10	19	22	82
	8.5	9.8	11.0	8.9	12.2	23.2	26.8	2.2
	1.7	1.7	1.8	1.5	1.8	2.9	3.1	
RICE CULT	13	8	28	13	12	8	18	100
	13.0	8.0	28.0	13.0	12.0	8.0	18.0	2.6
	3.1	1.7	5.5	2.7	2.2	1.2	2.5	
RUBBER TAP	20	42	26	17	33	27	51	216
	9.3	19.4	12.0	7.9	15.3	12.5	23.6	5.7
	4.8	9.0	5.1	3.6	6.0	4.2	7.1	
FISHERMEN	4	12	4	6	7	5	10	48
	8.3	25.0	8.3	12.5	14.6	10.4	20.8	1.3
	1.0	2.6	0.8	1.3	1.3	0.8	1.4	
FARMERS	70	77	70	78	69	102	119	585
	12.0	13.2	12.0	13.3	11.8	17.4	20.3	15.5
	16.9	16.6	13.8	16.3	12.5	15.7	16.5	
UNSKILLED LABOR	57	80	84	72	66	91	131	581
	9.8	13.8	14.5	12.4	11.4	15.7	22.5	15.4
	13.8	17.2	16.6	15.1	12.0	14.0	18.2	
TOTAL	414	465	507	478	551	649	720	3784
	10.9	12.3	13.4	12.6	14.6	17.2	19.0	100.0

Table 6.26

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL SOCIOECONOMIC STATUS AND TYPES OF PREVIOUS  
SECONDARY SCHOOLS.

PREVIOUS SCH		PARENTAL SES				TOTAL
		NO INFO 0	HIGH 1	MIDDLE 2	LOW 3	
NO INFO	0	35	17	69	100	221
		15.8	7.7	31.2	45.2	5.8
		7.8	3.1	5.9	6.2	
RESIDENTIAL	1	158	300	509	667	1634
		9.7	18.4	31.2	40.8	43.2
		35.3	55.0	43.2	41.4	
NON-RESID	2	206	179	496	703	1584
		13.0	11.3	31.3	44.4	41.9
		46.0	32.8	42.1	43.6	
OTHERS	3	49	49	105	142	345
		14.2	14.2	30.4	41.2	9.1
		10.9	9.0	8.9	8.8	
TOTAL		448	545	1179	1612	3784
		11.8	14.4	31.2	42.6	100.0



Table 6.27

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL SOCIOECONOMIC STATUS AND ACADEMIC QUALIFICATIONS  
AT ENTRY POINT.

ENTRY QUALIFICATION		PARENTAL SES				TOTAL
		NO INFO 0	HIGH 1	MIDDLE 2	LOW 3	
NO INFO	0	5	1	3	3	12
		41.7	8.3	25.0	25.0	0.3
		1.1	0.2	0.3	0.2	
MATRIX	1	152	286	464	595	1497
		10.2	19.1	31.0	39.7	39.6
		33.9	52.5	39.4	36.9	
STPM	2	197	212	575	831	1815
		10.9	11.7	31.7	45.8	48.0
		44.0	38.9	48.8	51.6	
OTHERS	3	20	22	49	37	128
		15.6	17.2	38.3	28.9	3.4
		4.5	4.0	4.2	2.3	
OFF CAMPUS	4	74	24	88	146	332
		22.3	7.2	26.5	44.0	8.8
		16.5	4.4	7.5	9.1	
TOTAL		448	545	1179	1612	3784
		11.8	14.4	31.2	42.6	100.0

Examination of the distribution of graduates in science and arts related schools (Table 6.28) shows that the high status group had a larger proportion (66.8%) of its graduates in science related schools than the middle

(60.9%) and low (54.2%) status groups. In the arts schools, the proportions of graduates according to parental socioeconomic status were: 33.2% high; 39.1% middle; and 45.8% low. Therefore, in each socioeconomic group, a greater proportion of graduates were in science. The ratio between science and arts school graduates was 2:1 (50.0%) for the high socioeconomic group, 3:2 (33.0%) for the middle group, and 6:5 (16.0%) for the low socioeconomic group.

Table 6.28

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO PARENTAL SOCIOECONOMIC STATUS AND SCIENCE AND ARTS RELATED SCHOOLS

ACADEMIC SCH		PARENTAL SES				TOTAL
		NO INFO	0	HIGH 1	MIDDLE 2	
SCIENCE	1	230	364	718	874	2186
		10.5	16.7	32.8	40.0	57.8
		51.3	66.8	60.9	54.2	
ARTS	2	218	181	461	738	1598
		13.6	11.3	28.8	46.2	42.2
		48.7	33.2	39.1	45.8	
TOTAL		448	545	1179	1612	3784
		11.8	14.4	31.2	42.6	100.0

The demographic pattern of graduates according to parental socioeconomic status (Table 6.21) shows that 60.0% of graduates from high socioeconomic status were from urban areas, and the other 40.0% were from rural areas. In the middle status group, the distribution of graduates by urban and rural areas was almost even, at 49.8% and 50.2%, respectively. In the low status group, 84.1% of graduates were from rural areas, and 15.9% from urban areas. This pattern corresponds to parental occupation: most of the professional, managerial, and high administrative positions are urban-type occupations. On the other hand, agricultural and unskilled labor are the occupational activities of the rural areas. As more schools were established in rural areas during the 1970s (see Chapter IV, Table 4.13), and preferential treatment was given on the basis of parental socioeconomic status and the location of schools in the selection of students for residential schools (Chapter IV), the low status group contributed 1,612 (42.6%) graduates over the years, in comparison to 14.4% and 31.2% from the high and middle status groups, respectively.

When parental socioeconomic status is cross-tabulated against states of residence of the graduates (Table 6.29), the majority of the graduates in each socioeconomic

status group were from the developed states. Among the high status students, 56.0% were in developed states, and 44.0% in less developed states, while within the middle and low status groups, the distribution was 64.8% and 35.2%, 50.8% and 49.2% in developed and less developed states of Malaysia, respectively. Thus, parents from developed states, from all socioeconomic status group, had better representation in the university during the 1982 to 1988 graduation years than did those in the less developed states. However, inter-status group competition within the developed states shows that families of middle socioeconomic status had better chances than the high and low status groups. Within the less developed states, more families from the low status group had opportunities for higher education than had the other two groups.

In Table 6.30, it is seen that female and male graduates of high socioeconomic status were equally distributed: 267 (49.0%) males, and 278 (51.0%) females. Within the middle class, the male graduates were better represented than the females: 662 (56.1%) to 517 (43.9%). The male graduates in the low socioeconomic group had an advantage over females: 1,110 (68.9%) males to 502 (31.1%) females. Given the overall gender distribution of Malay society, in which males and females were evenly

distributed (Malaysia, 1980), the females from the low socioeconomic status group were underrepresented in the ratio of 1:2.

Table 6.29

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO PARENTAL SOCIOECONOMIC STATUS AND STATES OF RESIDENCE.

STATES OF RESIDENCE		PARENTAL SES				TOTAL
		NO INFO	0	HIGH 1	MIDDLE 2	
DEVELOPED	1	287	305	764	819	2175
		13.2	14.0	35.1	37.7	57.5
		64.1	56.0	64.8	50.8	
LESS DEVELOPED	2	161	240	415	793	1609
		10.0	14.9	25.8	49.3	42.5
		35.9	44.0	35.2	49.2	
TOTAL		448	545	1179	1612	3784
		11.8	14.4	31.2	42.6	100.0

Table 6.30

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO GENDER AND SOCIOECONOMIC STATUS.

PARENTAL SES		MALE	%	FEMALE	%	TOTAL
NO INFO	0	279	62.3	169	37.7	448
HIGH	1	267	49.0	278	51.0	545
MIDDLE	2	662	56.1	517	43.9	1179
LOW	3	1110	68.9	502	31.1	1612
TOTAL		2318		1466		3784

In the overall development of preferential treatment to narrow the educational gap between the poor and the rich among Malays during the 1982-1988 graduation years, corresponding to the 1974-1985 admission years, there was a steady growth in the representation of graduates from the lower socioeconomic class, from 41.3% in 1982 to 48.8% in 1988. On the other hand, the proportion of graduates from the high socioeconomic class remained almost static, at 11.4% in 1982 and 12.9% in 1988. Thus, the increased representation of the low socioeconomic class caused a shrinking proportion in the middle class group, from 36.5% in 1982 to 26.3% in 1988 (Table 6.24). In the participation of parental socioeconomic status groups in the 1978-1980, 1982-1988 and 1989 graduation years (Table 6.31), the proportion of high socioeconomic status

families was maintained at 14.0% of the graduates during the twelve years. On the other hand, those in the low socioeconomic class gained 11.0%, from 39.4% in 1978-1980 to 42.6% in 1982-1988, to 50.5% in 1989. As during the 1982-1988 graduation years, when the middle group experienced a decline in its proportion of graduates, in 1989, the proportion of graduates from the middle class further decreased to 27.3%.

Table 6.31

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL SOCIOECONOMIC STATUS: A COMPARISON  
1978-1980, 1982-1988, 1989 (IN PERCENTAGE)

PARENTAL SES	1978-1980	1982-1988	1989
NO INFO	15.8	11.8	7.7
HIGH	14.7	14.4	14.5
MIDDLE	30.0	31.2	27.3
LOW	39.4	42.6	50.5

Source: Universiti Sains Malaysia, 1989,  
Admission and Record Division.

The national data on the development of Malay occupational distribution in 1970, 1980 and 1985 (Table 3.3) show that the high socioeconomic group expanded from 4.8% in 1970 to 6.0% in 1980 and 10.4% in 1985, an increase of 5.6% over the fifteen years. The middle class developed from 14.9% in 1970 to 19.8% in 1980, and to 24.0% in 1985, an increase of 9.0%. However, the low socioeconomic status group declined from 80.3% in 1970 to 74.0% in 1980 and to 69.1% in 1985, a decline of 11.2%. Comparing to the pattern of representation of Malay graduates at the University of Science, Malaysia (Table 6.31), the high and middle socioeconomic status groups have been overrepresented since the 1978 graduation year (1974 admission year), though in the 1989 graduation year there was a decrease in graduates from the middle class. On the other hand, graduates from the low socioeconomic status group were underrepresented throughout the years, though the gap had narrowed from 40.9% in the 1970s to 18.6% by the late 1980s. An 11.1% overall increase in graduates from the low socioeconomic status group from the 1978 to 1985 graduation years corresponding to the decline of the low socioeconomic status group by 11.2% from 1970 to 1985 in the national population. The preferential



treatment provided greater educational opportunities for Malays in the low socioeconomic status group.

Examining the proportion of graduates according to their parental occupation from 1978 to 1989 (Table 6.32), we see that parents in management/professional positions, high administrative posts and teaching almost maintained their proportions. Graduate representation from parents in business and the police force declined over the period, and other parental occupations in the middle socioeconomic status experienced a slight increase. A significant increase in graduate representation was experienced by farmer and laborer groups between the 1978 and 1989 graduation years. Other occupations in the low status group increased in their proportions of graduates, especially land settlers and rubber tappers.

Table 6.32

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL OCCUPATIONS: A COMPARISON (IN PERCENTAGE).

PARENTAL SES	1978-1980	1982-1988	1989
HIGH			
MANAGERIAL/PROFESSIONAL	1.7	0.8	1.5
ADMIN HIGH	3.5	4.5	4.0
TEACHING	9.5	9.1	9.0
MIDDLE			
BUSINESS	8.9	8.0	6.9
PENSIONERS	8.9	10.8	9.9
POLICE	6.1	4.9	2.6
ARMED FORCES	0.5	1.0	1.4
CLERICAL	1.9	1.5	2.1
ADMIN LOW	3.8	5.1	4.4
LOW			
SETTLERS	0.6	2.2	3.0
RICE CULTIVATORS	5.6	2.6	3.0
RUBBER TAPPERS	4.5	5.7	7.0
FISHERMEN	1.4	1.3	1.6
FARMERS	13.9	15.5	16.4
LABORERS	14.0	15.4	19.4
NO INFORMATION	15.8	11.8	7.7

Source: Universiti Sains Malaysia, 1989,  
Admission and Record Division.

#### 6.4 ORIENTATION

The inequitable state of output of Malay graduates in science related schools at the University of Malaya during the period of 1964-1970, when there were only 5.1% Malay graduates in a total output of 2,337 (Table 2.3), prompted the Majid Report Committee of 1971 to recommend preferential treatment for Malays to have greater access to science based faculties in higher education. When this recommendation was adopted for the distribution of Malay graduates in 1974 at the University of Science, Malaysia, then the proportion of Malay graduates in science related schools should indicate improvement over the studied period.

During 1965-1970, there was a paucity of Malay students in science classes, low academic achievement in science based subjects on public examinations, and a high correlation between poverty and poor performance in rural areas (Malaysia, 1977). In addressing this problem, the Majid Report Committee recommended special educational assistance, in the form of residential schools, to provide wider opportunities for Malay students in the science stream, especially for those from rural areas, to live and learn in better equipped schools and environments (The Majid Report, 1971: 45). In addition, the Report also

recommended the establishment of a pre-university science oriented educational program to assist Malay students, especially those from rural areas, in gaining admission to science related academic schools in higher education. These recommendations were implemented in the later 1970s, and the Malay graduates of 1982-1988 were the products of these educational assistance programs. Therefore, a significant improvement in the proportion of Malay graduates from these educational assistance programs over the years should provide evidence of the success of the policy implementation.

Discussion of the related policy for the subjects studied is divided into two sub-topics: fields of study, and assistance programs.

#### 6.4.1 FIELDS OF STUDY

The distribution of Malay graduates (Tables 6.33 and 6.34) shows that 2,186 (57.8%) graduated from science related schools, while 1,598 (42.2%) were from arts related schools. Over the years, the proportion of graduates in science related schools as opposed to arts related schools increased from 50.0% in 1982 to 61.9% in 1988, an increase of 11.9%. During these seven graduation years, the ratio between science and arts graduates improved from 1:1 in 1982 to 3:2 in 1988. The largest

increase in the proportion of graduates in science related schools occurred in the 1983 graduation year, by almost 10.0% over 1982. However, in 1984, this proportion declined by 6.0%, from 59.6% to 53.8%, but rose again to 57.1% in 1985. In 1986, the proportion of science graduates was 57.2%, a slight increase from 57.1% in 1985, although this included the first batch of graduates from medical sciences. In 1988, the proportion of science graduates increased to 61.9%, when schools of Computer Science, Engineering and Industrial Technology produced 127 new graduates. The 1987 graduation year produced the largest difference in graduates from science and arts related schools since 1982, a difference of 141 graduates. In 1988 the difference was 172.

As seen in Table 6.34, among the science related schools, Schools of Natural Science and Science Education produced 52.7% (1,152) of the science graduates. The Schools of Pharmacy and Medical Sciences trained 17.7% (387) of the graduates. In arts related schools, Schools of Social Sciences and Humanities produced 78.0% (1,246) of the graduates in arts. The School of Education (Humanities) trained 18.8% (300) of arts graduates.

The distribution of graduates in academic schools in each graduation year does not reflect significant changes.

The School of Natural Sciences produced 77 graduates in 1982 and 86 in 1988. The School of Science Education produced 69 graduates in 1982 and 1988. The only science related school that produced twice the number of graduates from 1982 to 1988 was the School of Housing, Building and Planning, from 21 to 47 graduates. Among the arts related schools, the number of graduates was also maintained after the 1982 graduation year. The School of Humanities produced 73 graduates in 1982, and 81 in 1988; the School of Social Sciences produced 99 in 1982 and 82 in 1988. The distribution of graduates in each academic school does not provide strong evidence of an increase in the number of Malay students in science based schools. However, the establishment of a greater number of science related schools than arts related schools provided adequate reasons for the implementation of the policy. Until 1985, the ratio between science and arts related schools was 5:3, and in 1988 it was 9:5 (Table 6.34). The establishment of Schools of Medical Sciences, Computer Sciences, Engineering and Industrial Technology provided additional science related schools for Malays. In 1988, Schools of Communication and Management were established, an addition to the existing three arts related schools.

Table 6.33

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
SCIENCE AND ARTS RELATED SCHOOLS

GRADUATION YEAR	SCIENCES	ARTS	TOTAL
1982	207	207	414
	9.5	13.0	10.9
	50.0	50.0	
1983	277	188	465
	12.7	11.8	12.3
	59.6	40.4	
1984	273	238	507
	12.5	14.9	13.4
	53.8	46.2	
1985	273	205	478
	12.5	12.8	12.6
	57.1	42.9	
1986	315	236	551
	14.4	14.8	14.6
	57.2	42.8	
1987	395	254	649
	18.1	30.7	17.2
	60.9	39.1	
1988	446	274	720
	20.4	17.1	19.0
	61.9	38.1	
TOTAL	2186	1598	3784
	57.8	42.2	100.0

Table 6.34

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO ACADEMIC SCHOOLS

ACD SCH	1982	1983	1984	1985	1986	1987	1988	TOTAL
NATURAL SCIENCES	77	91	83	103	96	83	86	619
	12.4	14.7	13.4	16.6	15.5	13.4	13.9	16.4
	18.6	29.6	16.4	21.5	17.4	12.8	11.9	
SCIENCE EDUCATION	69	96	78	79	65	77	69	533
	12.9	18.0	14.6	14.8	12.2	14.4	12.9	14.1
	16.7	20.6	15.4	16.5	11.8	11.9	9.6	
APPLIED SCIENCE	14	27	30	28	45	42	28	214
	6.5	12.6	14.0	13.1	21.0	19.6	13.1	5.7
	3.4	5.8	5.9	5.9	8.2	6.5	3.9	
PHARMACY	26	30	33	35	34	34	31	223
	11.7	13.5	14.8	15.7	15.2	15.2	13.9	5.9
	6.3	6.5	6.5	7.3	6.2	5.2	4.3	
HOUSING	21	33	49	28	33	44	47	255
	8.2	12.9	19.2	11.0	12.9	17.3	18.4	6.7
	5.1	7.1	9.7	5.9	6.0	6.8	6.5	
HUMANITIES	73	60	72	67	86	99	81	538
	13.6	11.2	13.4	12.5	16.0	18.4	15.1	14.2
	17.6	12.9	14.2	14.0	15.6	15.3	11.3	
HUMANITIES EDU	35	36	43	37	47	43	59	300
	11.7	12.0	14.3	12.3	15.7	14.3	19.7	7.9
	8.5	7.7	8.5	7.7	8.5	6.6	8.2	



Table 6.34 (Continued)

ACD SCH	1982	1983	1984	1985	1986	1987	1988	TOTAL
SOCIAL	99	92	119	101	103	112	82	708
SCIENCE	14.0	13.0	16.8	14.3	14.5	15.8	11.6	18.7
	23.9	19.8	23.5	21.1	18.7	17.3	11.4	
MEDICAL					42	64	58	164
					25.6	39.0	35.4	4.3
					7.6	9.9	8.1	
COMPUTER						51	77	128
						39.8	60.2	3.4
						7.9	10.7	
ENGINEERING							40	40
							100.0	1.1
							5.6	
COMMUNICATION							21	21
							100.0	0.6
							2.9	
MANAGEMENT							31	31
							100.0	0.8
							4.3	
INDUSTRIAL							10	10
							100.0	0.3
							1.4	
TOTAL	414	465	507	478	551	649	720	3784
	10.9	12.3	13.4	12.6	14.6	17.2	19.0	100.0

As seen in Tables 6.15 and 6.16, the graduates from rural areas constituted 62.7% of the science related school graduates, compared to 37.3% from urban areas. Over the years, the number of graduates from rural areas in the science related schools increased steadily, from 9.7% (133) in 1982 to 22.2% (304) in 1988 (Table 6.17), while graduates from urban areas increased from 9.1% (74) in 1982 to 17.4% (142) in 1988. Thus, the expansion of enrollment and the establishment of science related schools provided a greater number of Malays from rural areas than from urban areas to science based schools, during the 1982 to 1988 graduation years. When science and arts related schools are cross-tabulated against the developed and less developed states (Table 6.35), 61.1% of science related graduates were from developed states, and 38.9% from less developed states. In the arts, 52.5% of graduates were from developed states, and 47.5% from less developed states. Within the developed states, 61.4% of graduates were in science related schools, and among graduates from less developed states, 52.8% were in science related schools. Thus, emphasis on science related schools under the preferential treatment policy favored Malays in the developed states.

Table 6.35

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO SCIENCE AND ARTS RELATED SCHOOLS

ACADEMIC SCHOOLS		DEVELOPED 1	LESS DEV 2	TOTAL
SCIENCE	1	1336	850	2186
		61.1	38.9	57.8
		61.4	52.8	
ARTS	2	839	759	1598
		52.5	47.5	42.2
		38.6	47.2	
TOTAL		2175	1609	3784
		57.5	42.5	100.0

An examination of the socioeconomic status of the graduates in science related schools (Table 6.27) shows that 40.0% of graduates were from the low socioeconomic status group, while 16.7% and 32.8% were from high and middle status groups, respectively. The proportion of graduates from the middle socioeconomic status group was twice that of the high status group, and only 7.0% less than that of the low status group. In the overall distribution, more than 60.0% of graduates from high and middle status group were in science related schools, and for the low status group, 54.0% of graduates were in science. This resulted in greater competition among families in the low socioeconomic status group to get

places in science related schools. A detailed distribution of graduates in all academic schools (Table 6.36) indicates that in the School of Pharmacy and Medical Sciences, graduates with low socioeconomic status were fewer in number compared to those from high and middle status group. In fact, in these schools, the number of graduates from the middle class was the highest.

The detailed distribution of graduates according to parental occupations in science and arts related schools (Table 6.37) shows that more than 65.0% of the children of managerials/professionals, teachers and high positioned administrators groups were graduates of science related schools. There were more than 70.0% children of the armed forces and police personnel in science schools, compared to 68.0%, 63.0% and 59.0% children of clerks, low administrative officers and pensioners, respectively. For the business groups, 53.0% of their children graduated from science schools. Farmers were the only group who had 60.0% of their graduates from arts related schools. Graduates from fishermen's families were equally distributed between science and arts related schools. Rice cultivators had 79.0% of their graduates from science schools. Thus, emphasis on science related studies

produced an inclination toward science related schools across all occupational groups, except for farmers.

Table 6.36

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO ACADEMIC SCHOOLS

ACADEMIC SCH	PARENTAL SES				TOTAL
	NO INFO	0	HIGH 1	MIDDLE 2	
NATURAL SC	69	110	200	240	619
	11.1	17.8	32.3	38.8	16.4
	15.4	20.2	17.0	14.9	
SC EDUCATION	49	82	152	250	533
	9.2	15.4	28.5	46.9	14.1
	10.9	15.0	12.9	15.5	
APPLIED SC	25	26	71	92	214
	11.7	12.1	33.2	43.0	5.7
	5.6	4.8	6.0	5.7	
PHARMACY	23	32	87	81	223
	10.3	14.3	39.0	36.3	5.9
	5.1	5.9	7.4	5.0	
HOUSING	27	47	87	94	255
	10.6	18.4	34.1	36.9	6.7
	6.0	8.6	7.4	5.8	
HUMANITIES	73	55	171	239	538
	13.6	10.2	31.8	44.4	14.2
	16.3	10.1	14.5	14.8	
HUMAN EDU	31	38	81	150	300
	10.3	12.7	27.0	50.0	7.9
	6.9	7.0	6.9	9.3	

Table 6.36 (Continued)

ACADEMIC SCH	PARENTAL SES				TOTAL
	NO INFO	0	HIGH 1	MIDDLE 2	
SOCIAL SC	106	80	204	318	708
	15.0	11.3	28.8	44.9	18.7
	23.7	14.7	17.3	19.7	
MEDICAL	8	47	65	44	164
	4.9	28.7	39.6	26.8	4.3
	1.8	8.6	5.5	2.7	
COMPUTER	19	16	46	47	128
	14.8	12.5	35.9	36.7	3.4
	4.2	2.9	3.9	2.9	
ENGINEERING	8	4	8	20	40
	20.0	10.0	20.0	50.0	1.1
	1.8	0.7	0.7	1.2	
COMMUNICATION	3	3	2	13	21
	14.3	14.3	9.5	61.9	0.6
	0.7	0.6	0.2	0.8	
MANAGEMENT	5	5	3	18	31
	16.1	16.1	9.7	58.1	0.8
	1.1	0.9	0.3	1.1	
INDUST TECH	2		2	6	10
	20.0		20.0	60.0	0.3
	0.4		0.2	0.4	
TOTAL	448	545	1179	1612	3784
	11.8	14.4	31.2	42.6	100.0

Table 6.37

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PARENTAL OCCUPATIONS AND SCIENCE AND ARTS RELATED SCHOOLS

PARENTAL OCCUPATION		ACADEMIC SCH SCIENCE 1	ARTS 2	TOTAL
NO INFO	0	230	218	448
		51.3	48.7	11.8
		10.5	13.6	
MANAGERIAL/PROF	1	21	10	31
		67.7	32.3	0.8
		1.0	0.6	
ADMIN HIGH	2	119	52	171
		69.6	30.4	4.5
		5.4	3.3	
TEACHING	3	224	119	343
		65.3	34.7	9.1
		10.2	7.4	
BUSINESS	4	160	141	301
		53.2	46.8	8.0
		7.3	8.8	
PENSIONER	5	240	167	407
		59.0	41.0	10.8
		11.0	10.5	
POLICE	6	132	52	184
		71.7	28.3	4.9
		6.0	3.3	
ARMED FORCES	7	27	11	38
		71.1	28.9	1.0
		1.2	0.7	

Table 6.37 (Continued)

PARENTAL OCCUPATION		ACADEMIC SCH		TOTAL
		SCIENCE 1	ARTS 2	
CLERICAL	8	38	18	56
		67.9	32.1	1.5
		1.7	1.1	
ADMIN LOW	9	121	72	193
		62.7	37.3	5.1
		5.5	4.5	
SETTLERS	10	50	32	82
		61.0	39.0	2.2
		2.3	2.0	
RICE CULTIVATOR	11	79	21	100
		79.0	21.0	2.6
		3.6	1.3	
RUBBER TAPPER	12	128	88	216
		59.3	40.7	5.7
		5.9	5.5	
FISHERMEN	13	24	24	48
		50.0	50.0	1.3
		1.1	1.5	
FARMERS	14	237	348	585
		40.5	59.5	15.5
		10.8	21.8	
UNSKILLED LABOR	15	356	225	581
		61.3	38.7	15.4
		16.3	14.1	
TOTAL		2186	1598	3784
		57.8	42.2	100.0



The distribution by gender in science and arts related schools (Table 6.38) shows that 59.4% of science graduates were males, and 40.6%, females. In arts schools, the proportion was 63.8% males, and 36.2%, females. Among the overall male graduates, 56.0% were in science, and 44.0% in arts, while among the female graduates, 60.6% were in science and 39.4% in arts. The gender ratio in science related schools was 3:2, favoring male graduates.

Table 6.38

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO GENDER  
AND SCIENCE AND ARTS RELATED SCHOOLS

ACADEMIC SCHOOL		MALE 1	FEMALE 2	TOTAL
SCIENCE	1	1298	888	2186
		59.4	40.6	57.8
		56.0	60.6	
ARTS	2	1020	578	1598
		63.8	36.2	42.2
		44.0	39.4	
TOTAL		2318	1466	3784
		61.3	38.7	100.0

A further examination of gender distribution in academic schools (Table 6.39) shows that in schools of Science Education and Pharmacy, female graduates were better represented than males. In the Medical Science school, the male and female graduates were equally represented. In other science related schools - - Natural Sciences, Applied Science, Housing, Computer, Engineering and Industrial Technology - - male graduates were more highly represented. In arts, female graduates from the schools of Humanities Education and Communication were more numerous than males.

The Majid Report (1971) made an explicit recommendation for the establishment of residential schools to provide wider opportunities for Malay students in science classes. In addition, the Report also recommended the establishment of pre-university science oriented educational programs to assist Malay students seeking admission to science related schools in higher education. When academic schools and students' previous schools are cross-tabulated (Table 6.40), it is seen that 1,536 (70.3%) of Malay graduates were from residential schools, compared to 500 (22.9%) and 128 (5.9%) from non-residential schools and other educational institutions,

respectively. In the arts related schools, 1,084 (67.8%) and 217 (13.6%) graduates come from non-residential and other institutions, respectively, compared to 98 (6.1%) from residential schools. The establishment of residential schools, which emphasized science subjects, contributed 94.0% of Malay graduates in the science related schools in the 1982-1988 graduation years, compared to 6.0% in the arts. On the other hand, the non-residential schools, whose emphasis was more on arts related subjects, provided 31.6% science related graduates and 68.4% arts related graduates.

A further examination of graduates' previous schools (Table 6.41) shows that there was a steadily increasing number of students from residential schools, from 18.6% in the 1982 graduation year, to 43.3% in 1985, and to 53.3% in 1988. In fact, in the 1986 graduation year, the graduates from residential schools overtook those from non-residential schools by 12.1%.

Table 6.39

DISTRIBUTION OF MALAY GRADUATES  
ACCORDING TO GENDER AND ACADEMIC SCHOOLS

ACADEMIC SCHOOLS		GENDER		TOTAL
		MALE 1	FEMALE 2	
NATURAL SCIENCES 1		450	169	619
		72.7	27.3	16.4
		19.4	11.5	
SC EDUCATION 2		164	369	533
		30.8	69.2	14.1
		7.1	25.2	
APPLIED SCIENCE 3		177	37	214
		82.7	17.3	5.7
		7.6	2.5	
PHARMACY 4		103	120	223
		46.2	53.8	5.9
		4.4	8.2	
HOUSING 5		210	45	255
		82.4	17.6	6.7
		9.1	3.1	
HUMANITIES 6		387	151	538
		71.9	28.1	14.2
		16.7	10.3	
HUMAN EDU 7		94	206	300
		31.3	68.7	7.9
		4.1	14.1	

Table 6.39 (Continued)

ACADEMIC SCHOOLS		GENDER		TOTAL
		MALE 1	FEMALE 2	
SOCIAL SCIENCE	8	506	202	708
		71.5	28.5	18.7
		21.8	13.8	
MEDICAL	9	82	82	164
		50.0	50.0	4.3
		3.5	5.6	
COMPUTER	10	68	60	128
		53.1	46.9	3.4
		2.9	4.1	
ENGINEERING	11	35	5	40
		87.5	12.5	1.1
		1.5	0.3	
COMMUNICATION	12	8	13	21
		38.1	61.9	0.6
		0.3	0.9	
MANAGEMENT	13	25	6	31
		80.6	19.4	0.8
		1.1	0.4	
INDUST TECH	14	9	1	10
		90.0	10.0	0.3
		0.4	0.1	
TOTAL		2318	1466	3784
		61.3	38.7	100.0

Table 6.40

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
ACADEMIC SCHOOLS AND THEIR PREVIOUS SCHOOLS.

ACADEMIC SCH	PREVIOUS SCHOOLS				TOTAL
	NO INFO	RESID	NON-RESID	OTHERS	
SCIENCE	22	1536	500	128	2186
	1.0	70.3	22.9	5.9	57.8
	10.0	94.0	31.6	37.1	
ARTS	199	98	1084	217	1598
	12.5	6.1	67.8	13.6	42.2
	90.0	6.0	68.4	62.9	
TOTAL	221	1634	1584	345	3784
	5.8	43.2	41.9	9.1	100.0

In terms of the relationship between academic schools and students' types of entry qualifications (Table 6.42), the matriculation program contributed 1,480 (67.7%) graduates from the science related schools, compared to 580 (26.5%) and 109 (5.0%) with the Higher School Certificate (STPM) and other types of qualifications, respectively. The matriculation program provided 1,497, or 39.6%, of the overall graduates, of which 98.9% (1,480) were from science related schools, and 1.1% (17) from arts related schools. The STPM, on the other hand, provided

1,815 (48.0%) of the total graduates, of which 32.0% (580) were in science related schools and 68.0% (1,235) in the arts. The ratios of science to arts related school graduates are 10:1 and 2:1 for the matriculation program and the Higher School Certificate (STPM), respectively.

Table 6.41

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
PREVIOUS SCHOOLS BY YEAR OF CONVOCATION

PREVIOUS SCHOOLS	YEAR OF CONVOCATION							TOTAL
	1982	1983	1984	1985	1986	1987	1988	
NO INFO	37	37	40	23	33	33	18	221
	16.7	16.7	18.1	10.4	14.9	14.9	8.1	5.8
	8.9	8.0	7.9	4.8	6.0	5.1	2.5	
RESID	77	185	192	207	264	325	384	1634
	4.7	11.3	11.8	12.7	16.2	19.9	23.5	43.2
	18.6	39.8	37.9	43.3	47.9	50.1	53.3	
NON-RESID	241	214	215	210	197	243	264	1584
	15.2	13.5	13.6	13.3	12.4	15.3	16.7	41.9
	58.2	46.0	42.4	43.9	35.8	37.4	36.7	
OTHERS	59	29	60	38	57	48	54	345
	17.1	8.4	17.4	11.0	16.5	13.9	15.7	9.1
	14.3	6.2	11.8	7.9	10.3	7.4	7.5	
TOTAL	414	465	507	478	551	649	720	3784
	10.9	12.3	13.4	12.6	14.6	17.2	19.0	100.0

Table 6.42

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
ACADEMIC SCHOOLS AND ENTRY QUALIFICATIONS

ACADEMIC SCH	ENTRY QUALIFICATIONS					TOTAL
	NO INFO	MATRIX	STPM	OTHERS	OFF-CAM	
SCIENCE	6	1480	580	109	11	2186
	0.3	67.7	26.5	5.0	0.5	57.8
	50.0	98.9	32.0	85.2	3.3	
ARTS	6	17	1235	19	321	1598
	0.4	1.1	77.3	1.2	20.1	42.2
	50.0	1.1	68.0	14.8	96.7	
TOTAL	12	1497	1815	128	332	3784
	0.3	39.6	48.0	3.4	8.8	100.0

In the off-campus program, the percentage of graduates from science related schools was 3.3% (11), while in the arts it was 96.7% (321). This indicates an inclination of Malay graduates to pursue the arts rather than science subjects.

A further examination of the graduates' entry qualifications by the year of graduation (Table 6.43) indicates that graduates with the matriculation qualification at entry point increased steadily from 0.2% in 1982 to 39.1% in 1985, and to 53.8% in 1988. On the



other hand, graduates with the STPM qualification at entry point decreased from 81.9% in 1982, to 47.3% in 1985, and to 39.0% in 1988.

Table 6.43

DISTRIBUTION OF MALAY GRADUATES ACCORDING TO  
TYPES OF ENTRY QUALIFICATION BY YEAR OF CONVOCATION

ENTRY QUL	YEAR OF CONVOCATION							TOTAL
	1982	1983	1984	1985	1986	1987	1988	
NO INFO	3	4	1	1		2	1	12
	25.0	33.3	8.3	8.3		16.7	8.3	0.3
	0.7	0.9	0.2	0.2		0.3	0.1	
MATRIX	1	153	191	187	260	318	387	1497
	0.1	10.2	12.8	12.5	17.4	21.2	25.9	39.6
	0.2	32.9	37.7	39.1	47.2	49.0	53.8	
STPM	339	266	227	226	230	246	281	1815
	18.7	14.7	12.5	12.5	12.7	13.6	15.5	48.0
	81.9	57.2	44.8	47.3	41.7	37.9	39.0	
OTHERS	18	11	27	11	15	21	25	128
	14.1	8.6	21.1	8.6	11.7	16.4	19.5	3.4
	4.3	2.4	5.3	2.3	2.7	3.2	3.5	
OFF CAM	53	31	61	53	46	62	26	332
	16.0	9.3	18.4	16.0	13.9	18.7	7.8	8.8
	12.8	6.7	12.0	11.1	8.3	9.6	3.6	
TOTAL	414	465	507	478	551	649	720	3784
	10.9	12.3	13.4	12.6	14.6	17.2	19.0	100.0

#### 6.4.2 FINANCIAL ASSISTANCE

There are 105 bodies that offer scholarships and financial loans to students; of these, 18 are in the Federal and State governments; 16 are statutory bodies; 20 are private organizations; and 51 are business organizations (USM, Student Affairs Department, 1988). The amount of scholarships and loans varies from M\$1,500.00 to M\$4,500.00 per annum. Scholarships are mainly awarded based on field of study, student academic excellence and parental socioeconomic status. Students who receive scholarships are bound to serve the sponsors for an average of five to seven years. Those who accept financial loans are requested to begin making payments to sponsors on an installment basis six months after securing jobs. As indicated in Article 153, Part 3, Federal Constitution (Malaysia, 1986), "Yang Di Pertuan Agong (the King) ... to ensure ... the reservation to Malays ... of scholarships....", the awarding of scholarships and other financial assistance is in the ratio of 4:1 for Malays and non-Malays (The Students Affairs Department, 1988).

Besides establishing residential schools and the matriculation program to provide wider opportunities for Malay students in science related subjects, the provision

of financial assistance favoring students in science related subjects provides additional emphasis on science subjects. An examination of the distribution of financial assistance programs assisting graduates in the 1987-1988 graduation years (Table 6.44) shows that 92.1% (775) graduates in the science related schools received financial assistance in the form of scholarships and loans, compared to 79.8% (422) graduates in the arts. Out of 1,029 graduates who received scholarships, 683 (66.4%) were in science, and 346 (33.6%) in arts; of 168 graduates who were provided loans, 54.8% (92) and 45.2% (76) were from science and arts, respectively. There were 66 (38.2%) graduates in science and 107 (61.8%) in arts who did not receive any financial assistance. For the provision of scholarships during the period, the ratio between graduates in science and in arts was 2:1, and for the provision of loans, the ratio was 1.2:1.

A detailed examination of the distribution of financial assistance to Malay students among academic schools in the 1987 and 1988 graduation years (Table 6.45) shows that in science related schools, the recently established schools - - schools of Medical Science, Computer Science, Engineering Science and Industrial Technology (Chapter V, Table 5.1) - - received 39% of

scholarships and 10% of loans. Graduates from schools of Natural Science and Computer Science received 18% each of the scholarships, while schools of Science Education and Medical Science graduates received 15% each. Except for the graduates of the schools of Natural Science and Science Education, in science related schools, more than 75% of the graduates in the 1987 and 1988 graduation years received scholarships. Regarding financial loans, 67% of which were awarded to graduates of schools of Natural Science and Science Education, 16% to graduates of the School of Housing, Building and Planning, and 9% to graduates of the school of Engineering Science. However, all graduates of the schools of Pharmacy, Engineering Science and Industrial Technology received financial assistance.

In arts related schools (Table 6.45), graduates from earlier established schools - - Humanities, Humanities Education and Social Science - - absorbed 86% of the scholarships, and 100% of financial loans. However, all graduates of the school of Communication and 87% of graduates of the school of Management received scholarships.

Table 6.44

DISTRIBUTION OF MALAY GRADUATES (1986-1988) ACCORDING TO  
TYPES OF FINANCIAL ASSISTANCE AND ACADEMIC SCHOOLS

FINANCIAL ASSISTANCE	ACADEMIC SCHOOLS		TOTAL
	SCIENCE	ARTS	
SCHOLARSHIP	683	346	1029
	66.4	33.6	75.1
	81.2	65.4	
LOAN	92	76	168
	54.8	45.2	12.3
	10.9	14.4	
NO ASSISTANCE	66	107	173
	38.2	61.8	12.6
	7.8	20.2	
TOTAL	841	529	1370
	61.4	38.6	100.0

Note: Data on the financial assistance prior to 1987 convocation years was not available.

Table 6.45

DISTRIBUTION OF FINANCIAL ASSISTANCE TO MALAY GRADUATES  
ACCORDING TO ACADEMIC SCHOOLS 1987-1988

ACADEMIC SCHOOLS	SCH SHIP	LOAN	NO ASST	TOTAL
<b>A. SCIENCE SCHOOLS:</b>				
NATURAL SC	120	28	21	169
	71.0	16.6	12.4	20.1
	17.6	30.4	31.8	
SC EDUCATION	105	34	7	146
	71.9	23.3	4.8	17.4
	15.4	37.0	10.6	
APPLIED SC	60	5	5	70
	85.7	7.1	7.1	8.3
	8.8	5.4	7.6	
PHARMACY	64	1	-	65
	98.5	1.5	-	7.7
	9.4	1.1	-	
HOUSING	68	15	8	91
	74.7	16.5	8.8	10.8
	10.0	16.3	12.1	
MEDICAL SC	102	-	20	122
	83.6	-	16.4	14.5
	14.9	-	30.3	
COMPUTER SC	122	1	5	128
	95.3	0.8	3.9	15.2
	17.9	1.1	7.6	
ENGINEERING SC	32	8	-	40
	80.0	20.0	-	4.8
	4.7	8.7	-	
INDUSTRIAL TECH	10	-	-	10
	100.0	-	-	1.2
	1.5	-	-	
SUB TOTAL	683	92	66	841
	81.2	10.9	7.8	61.4

Table 6.45 (Continued)

ACADEMIC SCHOOLS	SCH SHIP	LOAN	NO ASST	TOTAL
<b>B. ARTS SCHOOLS</b>				
HUMANITIES	86	36	58	180
	47.8	20.0	32.2	34.0
	24.9	47.4	54.2	
<hr/>				
HUMANITIES EDU	91	9	2	102
	89.2	8.8	2.0	19.3
	26.3	11.8	1.9	
<hr/>				
SOCIAL SC	121	31	43	195
	62.1	15.9	22.1	36.9
	35.0	40.8	40.2	
<hr/>				
COMMUNICATION	21	-	-	21
	100.0	-	-	4.0
	6.1	-	-	
<hr/>				
MANAGEMENT	27	-	4	31
	87.1	-	12.9	5.9
	7.8	-	3.7	
<hr/>				
SUB TOTAL	346	76	107	529
	65.4	14.4	20.2	38.6
<hr/>				
TOTAL	1029	168	173	1370
	75.1	12.3	12.6	100.0

When financial assistance awards are cross-tabulated with parental socioeconomic status and academic schools (Table 6.46), it is seen that within science related schools, 38.7% (264) graduates with low socioeconomic status were awarded scholarships, whereas graduates from high and middle socioeconomic groups received lower percentages of awards, 15.5% (106) and 35.3% (241), respectively. For loans, the graduates from the low socioeconomic status group constituted a higher percentage 38.0% (35) of recipients, compared to high and middle socioeconomic status graduates, receiving 21.7% (20) and 26.1% (24), respectively. However, among those graduates who did not receive any financial assistance, 37.9% were from the lower socioeconomic status group, and 31.8% and 15.2% were from the middle and high groups, respectively. Comparing the socioeconomic status groups in science related schools, 84.3% of the middle class received scholarships, whereas the low class received 81.5%, and the upper class, 77.9%. Regarding loans, the high socioeconomic status group received 14.7%, a high proportion compared to 10.8% for the low class and 8.4% for the middle class. The proportions of these graduates who did not receive any financial assistance were similar for all classes. The overall distribution of financial



assistance to Malay students in science was almost in proportion to their socioeconomic composition: 92.6% high, 92.7% middle and 92.3% low.

When financial assistance distribution is measured according to demographic patterns, it is seen in Table 6.47 that 70% of scholarships and 60% of loans were awarded to rural Malay graduates. Among the urban graduates, 73% received scholarships, 16% loans, and 11% no assistance. Among those from rural areas, 76% received scholarships, 11% loans, and 13% no assistance. Even though the proportions of graduates from urban and rural areas without any assistance are similar, 11% from urban areas and 13% from rural areas, in absolute numbers the difference is great, 48 for urban and 125 for rural. In the overall distribution of financial assistance, a greater number of graduates from rural areas (819) than from urban areas (378) received benefits. However, when the distribution of financial assistance to graduates is cross-tabulated by state of residence (Table 6.47), 57% of scholarship receivers were from developed states, 52% of loan receivers were from less developed states, and 58% without assistance were from developed states. The overall advantage was enjoyed by the graduates from the developed states.

Table 6.46

DISTRIBUTION OF FINANCIAL ASSISTANCE  
 ACCORDING TO PARENTAL SOCIOECONOMIC STATUS  
 BY SCIENCE RELATED SCHOOLS 1987-1988

FINANCIAL ASSISTANCE	PARENTAL SES				TOTAL
	NO INFO	0	HIGH 1	MIDDLE 2	
SCHOLARSHIP	72	106	241	264	683
	10.5	15.5	35.3	38.7	81.2
	75.8	77.9	84.3	81.5	
LOAN	13	20	24	35	92
	14.1	21.7	26.1	38.0	10.9
	13.7	14.7	8.4	10.8	
NO ASSISTANCE	10	10	21	35	66
	15.2	15.2	31.8	37.9	7.8
	10.5	7.4	7.3	7.7	
TOTAL	95	136	286	324	841
	11.3	16.2	34.0	38.5	100.0

The development of residential schools and the matriculation program to prepare Malay students for entry into science related schools in higher education has been successful. As seen in Table 6.49, graduates from residential schools increased from 59.4% in 1983 to 80.5% in 1986 and to 89.0% in 1989. On the other hand, admission from non-residential schools to science related schools over the period decreased from 59.8% in 1983 to 13.1% in 1986 and to 6.4% in 1989. The proportion of graduates from residential schools also increased in the arts related schools, from 10.6% in 1983 to 14.5% in 1989. However, more than 60% of graduates of arts schools were from non-residential schools.

In analyzing the development of the matriculation program, it is seen that the admission of students from this program increased over the period, from 54.3% in 1983 to 79.6% in 1986, and to 88.3% in 1989. This caused a steady decline in the admission of students from STPM into science schools, from 42.8% in 1983 to 15.0% in 1986, and to 7.9% in 1989. In 1989, the arts schools admitted 11.1% students from the matriculation program. Overall, the majority of graduates from arts schools had the STPM qualification.

Table 6.49

DEVELOPMENT OF GRADUATES' PREVIOUS SCHOOLS AND  
ENTRY QUALIFICATIONS: A COMPARISON 1983, 1986, 1989  
(IN PERCENTAGE)

YEAR	PREVIOUS SCHOOLS			ENTRY QUALIFICATIONS		
	RESID	NON-RESID	OTHERS	MATRIX	STPM	OTHERS
1983						
SCIENCE	59.4	38.8	1.8	54.3	42.8	2.9
ARTS	10.6	59.8	29.6	-	100.0	-
1986						
SCIENCE	80.5	13.1	6.4	79.6	15.0	5.4
ARTS	5.1	64.3	30.6	-	78.7	21.3
1989						
SCIENCE	89.0	6.4	4.6	88.3	7.9	3.8
ARTS	14.5	66.7	18.9	11.1	84.2	4.1

Note: RESID : Residential schools  
NON-RESID : Non-Residential schools  
MATRIX : Matriculation Program  
STPM : Higher School Certificate.

Examining the distribution of financial assistance in 1987-1989 among Malay graduates (Table 6.50), one sees that the proportion of financial assistance to students in science related schools was more than 60.0% compared to that for arts schools. However, the proportion for the

science schools declined over the years from 65.3% in 1987 to 61.2% in 1989, though the actual number of financial assistance recipients increased from 344 in 1987 to 523 in 1989. On the other hand, there was a significant increase of financial assistance to students in arts schools, from 24.3% in 1987 to 44.0% in 1989, an increase of 183 to 331. The improvement in financial assistance to students in arts schools was due to public demand for more assistance for arts subjects in 1985 (Malaysia, 1986: 179).

Table 6.50

DISTRIBUTION OF FINANCIAL ASSISTANCE  
1987, 1988, 1989    A COMPARISON

ACADEMIC SCHOOLS	GRADUATION YEAR			TOTAL
	1987	1988	1989	
SCIENCE	344	431	523	1298
	26.5	33.2	40.3	63.3
	65.3	64.3	61.2	
ARTS	183	239	331	753
	24.3	31.7	44.0	36.7
	34.7	35.7	38.8	
TOTAL	527	670	854	2051
	25.7	32.7	41.6	100.0

## 6.5 EMPLOYMENT

In Malaysia, the development of human resources, in line with manpower requirements, is crucial to the success of the development efforts of the nation. In this light, the Third Malaysia Plan, 1976-1980 (Malaysia, 1976, p.138) states:

"A principal constraint in accelerating socioeconomic development is the shortage of trained manpower at all levels in the science and technical fields. The Plan's objective is to expand the supply of trained manpower in these fields through appropriate education and training policies and programs. The education and training of the Malays and other indigenous people in science, technical and management disciplines will continue to be stepped up in line with the long term objective of increasing their effective participation at all occupational levels in the modern sectors of the economy."

The "stepped up" strategy is also in line with the New Economic Policy, to prepare Malays to acquire at least 30% of commercial and industrial activities, at all levels of occupation and in all sectors by 1990 (Malaysia, 1976, 1980). Therefore, one major indicator of the achievement of the preferential policy in higher education is, in this part of the case study, obtained by analyzing occupational entries of Malay graduates, and, as far as possible, by making comparisons to non-Malay graduates. However, there is a significant limitation in the availability of data

on employment in the private sector, especially regarding information on employees' previous higher institutions and social background. Moreover, the lack of sufficient information on the occupational entries of graduates is partly due to the recent economic recession that led to increasing reports regarding the problems encountered by university graduates in securing employment. According to a Labor Force Survey (Malaysia, 1980), the rate of unemployment for those with tertiary education was 1.4% in 1980. Marimuthu (1985), who studied 1,983 graduates of the University of Malaya, found that 22.5% of them were unemployed six months after graduation. Isahak and Wan Kadir (1985), in a study reviewing unemployment data on professionals and graduates from 1976 to 1978, concluded that the average "waiting period" for most graduates was getting longer. They stated that the average waiting period for graduates with arts, economics and social science degrees was longer than for those with science, professional and technical training. The authors also found that the average waiting period was shorter for those with greater proficiency in English language.

The waiting period also differs among ethnic groups. Aminuddin, Johan and Sharifuddin (1986), in their study of job placement of social science graduates of the

University of Science, found that 49.6% of Malays, 44.4% of Chinese and 64.1% of Indians had to wait between one to six months to find their first jobs. The percentages of graduates who were able to secure jobs immediately after graduation were 18.5%, 27.8% and 19.5% for Malays, Chinese and Indians, respectively. Between seven to eighteen months after graduation, another 18.5% of Malays, 16.7% of Chinese, and 10.9% of Indians were employed.

The economic recession also affected the job status of graduates. Among 616 Malay graduates of the 1988 class (Universiti Sains Malaysia, 1988), after a period of six months, 227 (36.9%) are employed full time, while 127 (36.9%) hold part-time jobs, 261 (42.4%) are still waiting, and one is attending graduate school. Among the Chinese, 245 (55.4%) are employed full-time, 114 (25.8) part-time, and 83 (18.8) are searching for work. Among the Indians, 34 (38.6) have full-time jobs, 24 (27.3%) part-time, and 30 (34.1%) are waiting.

In 1987, estimates of the extent of graduate unemployment ranged from 46,000 (Malaysian Institute of Economic Research's estimate) to 30,000 (Malaysia, Ministry of Labor) (Kamal and Young, 1988). Unemployed graduates who held scholarships totaled 3,700 (Malaysia, Ministry of Education) as of September, 1987. These



figures will increase with the annual addition of new graduates from local universities and overseas, flooding the already saturated graduate labor market. Graduate unemployment is very much the product of the slowdown in public spending and the decline in private investment as a result of the economic recession. The importance of government as an employer is demonstrated by the fact that as many as one-third of all graduates recruited between 1980 and 1983 were in the public sector (Kamal and Young, 1988, cited from Sivananthiran, 1987:3). Kamal and Young (1988), in their survey of 1,759 unemployed graduates, found that the proportion of Malays was very high: 88%, compared to 7.5% Chinese and 4.3% Indians. A number of reasons may be offered for this phenomenon. In the early 1980s, the bulk of Malay graduates were absorbed by the government, particularly during the "full-employment exercise" (Malaysia, 1985). However, in 1983, when the government froze new employment because of a severe economic recession, most of the graduates, especially the Malays - - many were scholarship holders who would normally have been employed - - were forced into the open market. The economic slump had affected the private sector too. It did not expand, thus few jobs were created. Also, the slump was so serious that private firms even

retrenched higher echelon employees, such as professionals and managers, thus throwing more graduates back into the job market. Another explanation offered by Kamal and Young (1988) for the higher proportion of unemployed Malay graduates is related to the great incidence of the entry of Chinese graduates into a wider spectrum of family-related businesses and industries. In addition, from their discussions with various community leaders, the authors learned that there is more self-help among Chinese graduates, who appear to be quite prepared to take up a variety of jobs in spite of low pay (Kamal and Young, 1988:4).

Because of the limited data on the occupational entries of Malay graduates of the University of Science, Malaysia, this discussion will be based on the list of graduates employed by the government (Malaysia, Public Service Department, 1988), and information gathered from interviews. In addition, references are made to a few studies with regard to preferences for sectors and types of employment, as supplementary data.

#### 6.5.1 SECTOR OF EMPLOYMENT

Chew S.B. (1987:27) in a study of perceptions of 2,131 sixth form students regarding reasons for intending to pursue university education, found that 78.5% of the subjects had a clear desire for specific professional qualifications, while 61.7% saw better employment opportunities as the most important factor. However, 51.9% and 40.1% of the students indicated that the country needed their talents, and saw study for its own sake as a very important reasons. Chew concluded that the more probable reason is that the students want university education because it will enhance their employment prospects. When asked about their expected sector of employment, the vast majority of the students (69.9%) wanted to be in the government sector after graduating (Chew, 1988: 42, Table 18). Some 13.5% indicated their employment preference for the quasi-government sector (statutory bodies), and 11.3% preferred to seek employment in the private sector. Only 3.8% were prepared to be self-employed or to work in a family business. The percentage distribution of responses according to the desired sector of employment varied in some of the sub-groups of students. A higher portion of females (76.9%) than males (59.1%) indicated that they would like to work in the

government sector. For the quasi-government and private sectors, the proportions of males (16.5% and 16.9%) who indicated their preference were higher than those of females (10.4% and 6.0%) (Chew, 1987: 67, Annex VII). The percentage distribution of the responses by ethnic group also varied. A total of 79.4% of Malay students indicated their preference to work in the government sector, whereas only 56.6% and 66.7% of Chinese and Indian students, respectively, indicated likewise. The proportion of Malays who would like to work in the private sector was only 4.0%, whereas the proportions of Chinese and Indian students were 21.5% and 15.5%, respectively.

Cheong, Isahak and Marimuthu, in their study of the perceptions of 2,429 final year undergraduates, found that 56.0% of their respondents wanted to work in the public sector. A further 12.6% wanted to work in the quasi-government sector, 19.2% in the private sector, and only 4.4% wanted to be self-employed (Cheong, Isahak and Marimuthu, 1987: 108, Table 32). The data on choice of employer by gender show that 70.8% of the females chose the government as their employer, compared with 45.0% of the males. In addition, 23.1% of males and 14.8% of females preferred to work in the private sector. The Malay under-graduates had a higher dependence (64.3%) on the

government sector, compared with 54.9% and 59.9% for the Chinese and Indians, respectively. The Chinese had the highest dependence (36.5%) on the private sector, whereas the Malays and Indians accounted for 7.9% and 25.2%, respectively. Regarding self-employment, 5.6% of the Chinese showed interest, compared to 3.9% of the Malays, and 2.7% of the Indians.

Comparing the above findings, we see in Table 6.51 some changes in the perceptions of sixth form students and the final year undergraduates. With regard to the preference of government as employer, there was a significant decline of 15% to 2% between the sixth formers and the undergraduates. Regarding overall preference, the differences were from 69.9% to 56.0%. Among the Malays, the difference was 15%, from 79.4% for the sixth formers to 64.3% for the undergraduates. The Chinese perceptions changed from 56.6% to 54.9%, and those of the Indians from 66.7% to 59.9%, respectively. Regarding the choice of quasi-government bodies as employer, the percentage of preference among the Malays increased by 2.2% from the sixth form to the undergraduate level, while for other ethnic groups the overall preference declined. The choice of private sector and self-employment showed a significant increase from sixth form students to undergraduates, both

for the group, as a whole, as well as for sub-groups. The decline in preference for government jobs is partly due to the government's policy of trimming the number of its employees; the policy of privatization of government agencies, such as telecommunications, shipping and airways; the implementation of a policy to reserve at least 30% of private sector employment for Malays and other indigenous people of Sarawak and Sabah; and the government's provision of better incentives and protections for private investment in the country. Such government policies not only increase employment opportunities in the private sector for all groups, but provide secured opportunities and encouragement for Malays and other indigenous groups to venture into the private sector. However, the high proportion of students seeking government jobs could be attributed to job security in the government, for the government, unlike the private sector, will not lay off its employees even during an economic recession. In addition, the salary scheme in the government is as good as in the private sector.

In analyzing the pattern of fields of studies in relation to choice of employers, Cheong, Isahak and Marimuthu (1987: 135, Annex V) showed that highest proportion of students in education (81.6%), arts (73.8%),

medicine (70.4%), science (68.5%), mathematics (54.9%) and journalism (52.5%) chose the government as the desired employer. Those who chose the private sector were in specialized fields of accountancy (40.6%), law (35.3%), computer science (34.7%), journalism (30.0%) and economic/management (27.6%). In the area of self-employment, those who were in medicine (14.8%) and agricultural science (7.8%) showed greater interest than those in other fields.

Table 6.51

COMPARISON OF DESIRED SECTOR OF EMPLOYMENT OF SIXTH FORM STUDENTS AND FINAL YEAR UNDER-GRADUATES (IN PERCENTAGES)

	SECTORS OF EMPLOYMENT			
	GOVT	QUASI-GOVT	PRIVATE	SELF-EMPL
OVERALL				
SIXTH FORM	69.9	13.5	11.3	3.8
UNDER-GRADUATES	56.0	12.6	19.2	4.4
ETHNIC GROUP				
SIXTH FORM:				
MALAY	79.4	12.4	4.0	3.4
CHINESE	56.6	15.5	21.5	4.3
INDIAN	66.7	12.5	15.5	2.1
UNDER-GRADUATES:				
MALAY	64.3	17.3	7.9	3.9
CHINESE	54.9	6.6	36.5	5.6
INDIAN	59.9	4.8	25.2	2.7
GENDER				
SIXTH FORM:				
MALE	59.1	16.5	16.9	5.3
FEMALE	76.9	10.4	6.0	6.0
UNDER-GRADUATES:				
MALE	45.0	16.2	23.1	6.9
FEMALE	70.8	8.5	14.4	1.4

Source: Chew, S.B., 1987, "Perceptions and Expectations of Sixth Form Students," and Cheong, S.Y.; Isahak, H.; and Marimuthu, T., 1987, "Perceptions and Experiences of Final Year Under-graduates" in Aziz, U.; Chew, S.B. and Singh, J.S. (Eds.), Proceedings of The Seminar on Higher Education and Employment in Malaysia, University Malaya, Kuala Lumpur.



In analyzing the government employees listed by the Public Service Department of Malaysia (Table 6.52), a total of 2,812 graduates from the University of Science are employed by the government in various government departments and quasi-government bodies (Malaysia, 1988, Public Service Department). This is 26.2% of the total of 10,727 graduates produced during the 1972 to 1977 graduation years (see Table 5.20). Judging from the proportion of graduates who opted for the public sector, the other 73.8% (7,915 graduates) of the University of Science either took jobs in the public sector or self-employment, pursued further studies, or remained unemployed. The proportion of graduates employed by the public sector is very much lower than that found by Chew (1987) and Cheong, Isahak and Marimuthu (1987), who found more than 75% of their respondents seeking jobs in the public sector (see Table 6.51). A detailed breakdown of the proportions of graduates in all employment sectors other than the public sector, is unavailable. However, it is sufficient to conclude that the majority of the graduates of the University of Science flooded the non-public sector labor market.

The ethnic composition of the graduates employed in the public sector shows that 51.4% (1,445) are Malays, and 48.6% (1,367) are non-Malays. In comparison to the total ethnic graduates of the University of Science, 1972-1977, the proportion of Malays in the public sector is higher (29.0%) than that of non-Malays (23.8%) (see Table 5.20, and 6.52). This pattern of ethnic preference for employment in the public sector is in line with Chew's (1989) and Cheong, Isahak and Marimuthu's (1987) (see Table 6.51) findings. Thus, 71.0% (4,978) of Malay graduates and 76.2% (5,749) of non-Malay graduates from the University of Science entered the private sector.

Analysis the gender of graduates employed in the public sector shows that 58% are males, and 42% females. Among Malays, the proportion of males is 68% and of female', 32%; and among non-Malays, the proportions are 62% and 38% for males and females, respectively (Table 6.25). In both ethnic groups, male graduates constitute more than two-thirds of government employees, and between Malays and non-Malays, there are more Malay males employed than non-Malay males. Among the females, more non-Malay female graduates than Malay females are employed in the public sector.

Table 6.52

THE UNIVERSITY OF SCIENCE GRADUATES  
EMPLOYED IN GOVERNMENT ESTABLISHMENT - 1988

A.	ETHNIC GROUP	NUMBER	PERCENTAGE
	MALAY	1445	51.4
	NON-MALAY	1367	48.6
	TOTAL	2812	
B.	GENDER		
	MALE	1631	58.0
	FEMALE	1181	42.0
	TOTAL	2812	
C.	GENDER BY ETHNIC GROUP		
	MALAY:		
	MALE	984	68.1
	FEMALE	461	31.9
	NON-MALAY:		
	MALE	846	61.9
	FEMALE	521	38.1
D.	ACADEMIC DISCIPLINES		
	MALAY:		
	SCIENCE	520	36.0
	ARTS	925	64.0
	NON-MALAY:		
	SCIENCE	794	58.0
	ARTS	573	42.0

Source: Malaysia, 1988, Public Service Department.

When they are cross-listed with academic disciplines (Table 6.52), Malay employees were composed of 36% science and 64% arts graduates, while for non-Malays the proportions are 58% science and 42% arts graduates. In comparison with the total graduates produced (2,324) up to 1987 by the University of Science, Malaysia (see Table 5.20), the number of Malay science graduates employed in the government (520) is 22.4%. Among non-Malays, the proportion of science graduates employed in the government is 22.1% , that is, 794 out of 3,592 science graduates over the years. Among the arts graduates, there are 32.4% (925) Malay graduates employed, out of the total 2,851, compared to 24.6% (573) out of 2,331 graduates produced within the period. Thus, in absolute numbers, among the arts graduate employees, the Malays exceed the non-Malays, and, on the other hand, there are more non-Malays among the employed science graduates. Nevertheless, about 88% of science graduates and 68% of arts graduates, both Malays and non-Malays, are available to the job market, aside from the public sector.

Out of 1,445 Malay graduates employed in the public sector, 768 are graduates from the period 1982 to 1987. In examining their parental socioeconomic background, it

is found that 25% (191) are from high social status, while 32% (238) and 43% (329) are from middle and low social classes, respectively. This distribution is similar to the overall distribution of Malay graduates according to parental socioeconomic status (Table 6.26). In analyzing their place of residence, 60.8% (467) are from rural areas, and 39.2% (301), from urban areas. Since most government employment establishments, except schools, are in urban areas, we can conclude that 60.8% (467) of these Malay graduates who are from rural areas have migrated to urban areas, and 32% (248) and 43% (329) of them who are from middle and low social classes have moved up the social ladder.

As pointed out earlier, prior to 1983, when the government employment-freeze policy was instituted, the bulk of Malay graduates, especially those bounded by scholarship agreements to serve the government for five to seven years, were absorbed into government service. Because of economic recession, such practice was put on hold in 1983, and in 1985 government scholarship holders were released from the bond to serve the government. Thus a greater number of Malay graduates were forced into the open market. From an interview with 36 Malay graduates in the private sector, it was found that sixteen of them were

government scholarship holders, six had states government loans, and four were without any financial assistance. A significant proportion of Malay graduates, especially the scholarship holders employed in the private sector, reflect a new pattern of employment among Malay graduates, who previously preferred government employment (Kamal and Young, 1988). The economic slump, coupled with the government's preferential policy in higher education and employment, forced the Malay graduates to venture into the private sector.

Analysis of the parental socioeconomic status of these 36 Malay graduates employed in the private sector shows that 42% (15) are from the high social class, while 31% (11) and 28% (10) are from the middle and low social classes, respectively. Unlike the public sector, where the majority of Malay graduate employees are from the low social class, the private sector attracts greater numbers of graduates from higher social classes. Furthermore, in examining their place of residence, 66.7% (24) of them are from urban areas, while 33.3% (12) are from rural areas, an indication of a lower percentage of rural Malay graduates venturing into the private sector. Nevertheless, this is an encouraging phenomenon, for in the early 1970,

the proportions of Malays from rural areas in the private sector were quite lower (Jamil, 1983 : 45).

#### 6.5.2 FIELDS OF EMPLOYMENT

Comparing Chew's (1987) and Cheong, Isahak and Marimuthu's findings regarding desired fields of occupation (Table 6.53), the final year undergraduates showed more of an inclination toward administrative jobs (40.7%) than toward teaching (24.2%) or professions (25.6%). The sixth formers, on the other hand, preferred professional jobs (35.5%) to teaching (22.2%) or administrative positions (16.6%). Among the Malays in the sixth form, 27.9% desired teaching, 20.2% professions, and 19.7% administrative posts. The Chinese (23.7%) and the Indians (30.6%) in the sixth form, on the other hand, preferred professional jobs to teaching and administrative positions. However, the majority of each ethnic group among the under-graduates desired administrative positions more than teaching and professions. A similar pattern appears when selection of desired fields of occupation is analyzed according to gender. Both male and female sixth formers showed more interest in professions, while the

under-graduates of both groups preferred administrative positions over teaching and professions.

In examining the 2,812 graduates of the University of Science employed in government service, we see in Table 6.54 that 62.9% (1,769) of these graduates are teachers, 7.1% (200) are in the diplomatic and civil service divisions, and 30.0% in other administrative and professional offices of Federal and state government and quasi-government establishments. Although teaching was not the most preferred occupation among the sixth formers and the final year under-graduates (see Table 6.53), yet the teaching profession brings more than two-thirds of these graduates into the government sector. Educational expansion in the country since early in 1970, especially secondary education, where graduate teachers are employed, has provided jobs to almost 90% of graduates with teaching degrees in government schools (Malaysia, 1986). In other government establishments, expansion of employment has been less than 15% since 1970, especially when the government instituted an employment freeze in 1983 (Malaysia, 1986).



Table 6.53

SELECTED DESIRED FIELDS OF OCCUPATION: A COMPARISON  
BETWEEN SIXTH FORMERS AND FINAL YEAR UNDERGRADUATES  
(IN PERCENTAGE)

A. OVERALL	FIELDS OF OCCUPATION		
	ADMIN POSITION	TEACHING	PROFESSIONALS
SIXTH FORMERS	16.1	22.2	35.5
UNDERGRADUATES	40.7	24.2	25.6
B. ETHNIC GROUP			
SIXTH FORMERS:			
MALAY	19.7	27.9	20.2
CHINESE	1.5	14.9	23.7
INDIAN	5.6	18.0	30.6
UNDERGRADUATES:			
MALAY	45.3	22.2	18.6
CHINESE	34.9	27.9	24.9
INDIAN	40.1	29.2	19.8
C. GENDER			
SIXTH FORMERS:			
MALE	18.3	9.3	43.0
FEMALE	14.9	25.7	27.1
UNDERGRADUATES:			
MALE	44.3	13.7	26.9
FEMALE	37.3	35.6	15.7

Source: Chew, S.B., 1987, "Perceptions and Expectations of Sixth Form Students", and Cheong, S.Y., Isahak, H., and Marimuthu, T., 1987, "Perceptions and Experiences of Final Year Undergraduates", in Aziz, U.A., Chew, S.B. and Singh, J.S., 1987, Proceedings of The Seminar on Higher Education and Employment in Malaysia, University of Malaya, Kuala Lumpur.

Table 6.54

DISTRIBUTION OF GRADUATES OF THE UNIVERSITY OF SCIENCE,  
MALAYSIA, LISTED AS GOVERNMENT EMPLOYEES IN 1988

ETHNIC GROUPS	TYPES OF JOBS			TOTAL
	TEACHING PROF	DIPLOMATIC & CIVIL SERVICE PERSONNEL	OTHER ADMIN & PROFESSIONAL POSITION	
MALAYS	714	157	574	1445
	49.4	10.9	39.7	51.4
	40.4	78.5	68.1	
NON-MALAYS	1055	43	269	1367
	77.2	3.1	19.7	48.6
	59.6	21.5	31.9	
TOTAL	1769	200	843	2812
	62.9	7.1	30.0	100.0

Source: Malaysia, 1988, Public Service Department.

Note: "Other Administrative officers" include those in the Federal Ministries, State Government Establishment and Semi-Government bodies.

The teaching profession absorbs 49.4% of Malay graduates, while the diplomatic and civil services and other administrative and professional positions absorbed 10.9% and 39.7%, respectively. Among non-Malay graduates, more than three-fourths (77.2%) are in teaching positions, whereas diplomatic and civil services and other administrative and professional posts account for 3.1% and 19.7%, respectively. Thus, 50.6% of Malay graduates are employed as government administrators, compared to 22.8% of non-Malays. In teaching, non-Malay graduates constitute almost two-thirds (59.6%), while Malays, just about one-half (49.4%).

In comparison to the number of graduates produced by the University of Science, Malaysia in 1972 - 1987, and the number of graduates employed according to their degrees, we see in Table 6.55 that 73.8% of those with teaching degrees are employed in government educational institutions, while only 12.5% of graduates with other degrees are employed in diplomatic and civil services, and administrative and professional positions. Out of 816 Malay teaching graduates from between 1972 to 1987, 87.5% (714) are employed in government schools, compared to 66.7% (1055) of the total of 1582 non-Malay teaching graduates. Thus, 12.5% (102) of Malay graduate teachers

and 33.7% (527) non-Malay graduate teachers are either teaching in private educational institutions, or employed in non-teaching jobs. For other non-teaching degrees, 82.4% Malays and 92.5% non-Malays are either in private sector, self-employment or unemployment. In both cases, types of degrees or types of employment, a greater proportion of Malays than non-Malays are employed in the government sector.

Cheong, Isahak and Marimuthu (1987) ( Table 6.53) indicated that a greater proportion of male final year under-graduates desired to seek employment in administrative and professional positions, while the majority of females preferred administrative and teaching jobs. However, in examining the gender distribution of government graduate employees, we see in Table 6.56 that for all the three types of occupations, the male graduates comprise 61% in teaching, 81% in diplomatic and civil services, and 69% in other administrative and professional positions. Within ethnic groups, male graduates also dominate all types of occupations. The male majority for each ethnic group is most significant in the diplomatic and civil service, than in any other types of occupation.

In the private sector, out of 36 Malay graduates employed, 14 are in public relation personnel jobs, 12

in the personnel management jobs, and 10 in marketing, research and production. On the other hand, out of five non-Malays, one, an Indian, is in the personnel management, and the other four Chinese are in marketing and research. Although these interview samples are small, we nevertheless see that Malay graduates employed by the public sector are attracted to administrative positions and non-Malays to marketing and research. The graduates employed in public relations and in personnel management are graduates in humanities and social sciences, while those in marketing, research and production are graduates in mathematics, chemistry and physics. Since the University is producing a greater proportion of Malay science graduates, and the private sector is required by the government to employ at least 30% Malays and other indigenous peoples of Sabah and Sarawak in all sectors of employment, the opportunity for Malay science graduates to obtain employment in other than administrative posts is better. In addition, it is sufficient to hypothesize that the expansion of employment opportunities in the private sector will provide greater employment for Malay graduates, especially from rural areas and low socioeconomic backgrounds, who are growing in number in higher educational institutions.

Table 6.55

DISTRIBUTION OF GRADUATES EMPLOYED IN PRIVATE SECTOR  
ACCORDING TO ETHNIC GROUP - 1988

A. GRADUATES PRODUCED DEGREES		ETHNIC GRAD	NUMBER OF GRAD	
TEACHING		MALAY		816
		NON-MALAY		1582
		TOTAL		2398
OTHERS		MALAY		4162
		NON-MALAY		4167
		TOTAL		8329
B. GRADUATES EMPLOYED EMPLOYMENT		ETHNIC GRAD	NO OF GRAD	% OF A&B
TEACHING		MALAY	714	87.5
		NON-MALAY	1055	66.7
		TOTAL	1769	73.8
DIP, CIVIL, ADMIN & PROF		MALAY	731	17.6
		NON-MALAY	312	7.5
		TOTAL	1042	12.5

Source: Malaysia, 1988, Public Service Department.

Table 6.56

DISTRIBUTION OF MALAY GRADUATES LISTED AS  
GOVERNMENT EMPLOYEES ACCORDING TO GENDER IN 1988

ETHNIC	TYPES OF JOBS			TOTAL
	TEACHING	DIP. & CIVIL	OTHER ADM	
<b>A. MALAY</b>				
MALE	469	126	389	984
	47.7	12.8	39.5	68.1
	65.7	80.3	67.8	
FEMALE	245	31	185	461
	53.1	6.7	40.1	31.9
	34.7	19.7	32.2	
SUB TOTAL	714	157	574	1445
	49.4	10.9	30.7	100.0
<b>B. NON MALAY</b>				
MALE	616	35	195	846
	72.8	4.1	23.0	61.9
	58.4	81.4	72.5	
FEMALE	439	8	74	521
	88.4	1.5	14.2	38.1
	41.6	18.6	27.5	
SUB TOTAL	1055	43	269	1367
	77.2	3.1	19.7	100.0
<b>C. TOTAL:</b>				
MALE	1085	161	584	1830
	61.3	80.5	69.3	
FEMALE	684	39	259	982
	38.7	19.5	30.7	

CHAPTER V11  
SUMMARY AND CONCLUSION

7.1 THE CONTEXT OF THE STUDY

In virtually all the multiethnic societies - - such as India, Sri Lanka, Canada, Belgium or Malaysia - - educationally and economically disadvantaged ethnic groups are demanding governmental intervention on their behalf. Most governments have responded either out of a concern for social justice, or to mitigate political conflict. Fundamentally, the growing world-wide concern for reducing inequalities among ethnic groups is related to the broader concern about income and social inequalities among classes. However, there are at least two reasons why the Malaysian government considers ethnic inequalities less acceptable than class inequalities. One reason is that differences among ethnic groups are seen as an indication of differences in opportunities, proof that the past society had allocated access to education and employment unfairly and that "dominant groups" (the non-Malays) enjoy an advantage, using their positions to restrict others from gaining upward mobility. In contrast, class differences, may not necessarily reflect inequality of



opportunity: they may actually result from equality of opportunity. In a competitive race in which all have an equal opportunity to move up, the results are uneven, and such unequal results are considered legitimate. The second reason why ethnic inequality is of greater social and political concern than class differences in Malaysia is that when ethnic differences lead to ethnic conflict - - as in the May 13, 1969 Incident - - the results are more destructive to social order than class conflict. It is this concern for providing distributive justice and minimizing ethnic conflict that has led Malaysian policy planners and implementers to focus on the question of how to reduce inequalities among Malaysian ethnic groups.

Various policies aimed at increasing the education, income and occupational equality of Malays have been adopted by the government. Preferential treatment is only one of several such policies. Among the others are: regional and rural development plans, selected investment strategies, and social service programs. Preferential policies provide special benefits to Malays as a particular ethnic group. The advantage of such explicit policies is that they ensure that the target ethnic group will benefit; it is also argued that the benefits accrue more quickly. Most important, the policies are

politically attractive to the leadership and to other advanced elements of the Malay ethnic group, for they are normally the major beneficiaries.

In Malaysia, preferential policies for the Malays have been given a constitutional status. Article 153 of the Constitution authorizes a mechanism "to safeguard the special position of the Malays" through a system of quotas applied to public service, to scholarships, and to licenses for any trade or business (Chapter II, p. 119). In 1971, after the severe ethnic violence of May 13, 1969, the government introduced the policy of reservation that makes it obligatory for all higher educational institutions receiving government funds to reserve 55% of their places for Malay students. Since institutions of higher education in the country are funded by the government, this is a powerful measure. In addition, to ensure that education functions as a mechanism for occupational mobility and to accelerate this mobility, the government established a policy of "reserving" 30% employment in private sector undertakings for Malays.

The main focus of this study is on higher education for Malays. In 1971, the development of education in Malaysia focused on the question of government intervention policies addressing the wide gap that existed

between Malays and non-Malays in educational opportunities at the tertiary level. Since acquisition of tertiary education determines the access respective communities have to higher levels of employment, the government made an earnest effort to increase the opportunities for Malays in secondary and tertiary level education (see Chapter IV). The government's educational policies for the Malays focused on two goals:

- a. allocating more educational places in higher education to Malays through a quota system, and
- b. decreasing disparities within the Malay community by providing more "equal" distribution of access to higher education to rural Malays and Malays with low socioeconomic status.

One major research question in this study was whether this powerful governmental policy instrument in higher education - - the preferential policy - - promotes growth and equity for the Malay ethnic group.

## 7.2 THE MAJOR FINDINGS AND DISCUSSION

The overall findings of this study show that there has been improvement in Malay enrollment, as well as

increasing equality of educational opportunity in higher education within the Malay society in Malaysia; and that those who have experienced higher educational opportunity have also experienced increasing upward social mobility. This is true particularly for Malays with low socioeconomic status and from rural areas.

#### 7.2.1 NATIONAL LEVEL

This study examined the question of equality of educational opportunity in terms of access to higher education through the government's preferential policy, as measured by admissions and graduation. It was found that the efforts to raise Malay participation in tertiary education since 1970 (Table 4.42) have resulted in a respectable level of representation, from 40.2% in 1970 to 65.0% in 1985. Over fifteen years, from 1970 to 1985, Malay enrollment increased by 610.6% compared to the total annual enrollment increase of 22.6% and the total enrollment increase of 339.5%. Of all ethnic groups enrolled in local tertiary education, Malays increased in representation from 40.2% in 1970 to 57.3% in 1975, 66.2% in 1980, declining slightly to 65.0% in 1985. If the basic goal of the preferential policy quota system was for

enrollment in national institutions to reflect the ethnic population percentages in the country, then the objective of the policy has been overfulfilled, since Malays only constitute 55.0% of the population. The gap between Malays and non-Malays in domestic higher education was reversed over the period. However, if the policy's goal was to address Malay enrollment percentages at both local and foreign institutions, then the policy has failed, for the number of Malays enrolled in local and foreign universities in 1980 and 1985 constituted 45.4% and 49.4%, respectively, compared to 54.6% and 50.6% for non-Malays (Table 4.45). Although the percentages and actual numbers of Malays in higher education increased significantly, and although the percentages of non-Malays declined considerably because of the preferential policy, the actual number of students and graduates from all ethnic groups increased continuously. From 1970 to 1985, the number of Chinese students increased by 5,376, Indians by 1,858, and Malays by 18,831 (Table 4.42). The increased ethnic representation was made possible, particularly under the implementation of the quota system, by the fact that four new universities were established by the government between 1969 and 1972. In 1984, another university was established (p. 221-224).

The composition of Malays in Malaysian science and arts related higher education also underwent some changes. In 1970, Malays constituted 15.2% in science related schools, 58.8% in arts related schools and 10.8% in professional schools; in 1975, their proportions had increased to 36.2%, 74.5% and 41.8%, respectively. In the 1986 convocation class, Malays constituted 57.7% of science graduates, 62.5% of arts graduates and 49.7% of professionals (Tables 4.47, 4.50, 4.51, 4.52). Although non-Malays experienced a decline in percentage representation after 1975 because of the implementation of the preferential policy, they gained in actual numbers of students. In 1970, there were 4,593 non-Malays in Malaysian universities, in 1975, 6,410; and in 1985, 11,826 (Table 4.42).

At the University of Science, Malaysia, the proportion of Malays and non-Malays reflects the actual ethnic composition of the country's population (p. 133-134). The proportion of Malay students at the university increased from 1.8% in 1970 to 35.3% in 1974, and to 53.3% in 1985 (Table 5.2). Non-Malays, though they declined in their proportion, experienced an increase in their actual enrollment, from 56 in 1970 to 751 in 1986 (Table 5.2).

Thus, the government's preferential policy in higher education in Malaysia has brought about wider access to educational opportunities to all ethnic groups, though the principal beneficiaries, as indicated in the policy, are the Malays. If not for the ethnic quota in the preferential policy, the proportion of Malays in higher education would not be what it is now. This powerful instrument of social engineering by the government of Malaysia has brought about major benefits to Malays in a short time - - less than two decades (1971-1988). On the other hand, as Malay proportion in higher education expanded, non-Malay representation experienced displacement.

#### 7.2.2 THE CASE STUDY

The preferential policy under Article 153 of the Constitution is supplemented by the recommendations of the Majid Report of 1971, which provide specific strategies to improve Malay representation in higher education (p. 133-130). The Report, which became the basis for the preferential policy in higher education and other areas, explicitly called for conscious efforts by the authorities, government and universities, to increase

Malay representation in science-based schools, where Malay representation was low, and to provide special educational assistance to Malays from rural areas for the study of science. A case study of the cohort of 3,784 Malay graduating classes from 1982 to 1988 at the University of Science, Malaysia, was undertaken to examine the impact of the government's preferential policy in higher education. The main findings are:

1. The proportion of Malay students admitted compared to non-Malays in science-related schools increased from 34.6% (17) in 1970 to 39.5% (84) in 1975, and to 59.1% (533) in 1985; in arts related schools Malay representation was 50.9% (60) in 1970, 66.1% (196) in 1975 and 51.0% (330) in 1985 (calculated from Tables 5.3 to 5.16). The increased proportion of Malays in science related schools between 1975 and 1985 was 20.0%, which is a very significant development within a decade. In newly established science based schools, Malay students constituted more than two-thirds of the enrollment. In 1985 admissions, the proportion of Malay students in the Medical Science School was 87%; in Computer Science, 61%; in Engineering, 70%; and in Industrial Technology, 57%. Of other science related schools, those established before 1981, only the School of Pharmacy had more than 50%



Malays, (57.7% in 1975). In 1985, however, Malays constituted between 55% to 62% of the total enrollment, except in the School of Natural Sciences, where Malays represented only 31%. In the arts related schools, Malay represented 55% of the total 1985 enrollment, in the newly established schools of Communication and Management, but 1985 Malay enrollment decline by almost 50% compared to 1975 in the Schools of Humanities and Social Science.

The composition of Malay and non-Malay graduates in 1979 and 1988 graduating classes (Tables 22 to 26) reveals that the ethnic quota admission policy did affect the proportion of Malay graduates, particularly in science related schools. The percentage of Malay graduates in science related schools increased from 27.5% in the 1979 graduating class to 49.7% in that of 1988.

The government's efforts to increase Malay students in science related schools brought a decline in the proportion of Malay students in arts related schools. In 1975, Malays constituted 66% of students in arts related schools, but in 1985, this proportion was 51%, a decrease of 15%. In science related schools, they constituted 39.5% in 1975, but in 1985, it was 59.1%, an increase of 20.0%.

Regarding the overall development of the Malay student population in the University of Science, Malaysia,

during the implementation of the preferential policy between 1975 and 1985, there was a dramatic change in Malay student representation, from 40% to 60% at science related schools, and from 66% to 51% at arts related schools, between these two years.

2. The implementation of an admissions quota of 55% Malays into higher education, especially in science related studies, demanded that a greater number of Malays graduate in science in secondary schools. However, in 1971, there was not only a paucity of Malay students in science classes in secondary schools, but also low academic achievement in public examinations at MCE and HSC/STPM (Tables 4.33 and 4.38). The government-sponsored Dropout Report of 1971 showed a positive correlation between poverty and poor academic performance among Malays in rural areas. In 1971, the government established well-equipped secondary residential schools to provide wider opportunities for Malay students to pursue science related studies.

Graduates from residential schools had a great impact on the types of Malay students admitted to the University of Science. Of the 1978-1980 Malay graduates, 17.2% were graduates from residential schools; in 1982-1988, their

proportion had increased to 43.2%, and in 1989, it was 59.0% (Table 5.33). On the other hand, Malay University of Science graduates who had attended non-residential schools declined in proportion from 70.8%, to 41.9% and 30.8% in the same years, while others who had graduated from other institutions - - private schools - - also declined from 12.0% to 9.1% and 10.1%. Of 3,784 Malay graduates in the case study, 1,634 (43.2%) had attended residential schools, 1,584 (41.9%) non-residential, and 345 (9.1%) other educational institutions (Table 6.6).

The important role of residential schools in providing an increasing proportion of Malay students at the university is clear when we compare the residential schools' total enrollment of 18,426 (19%) (p. 291) to the 87,070 (81%) of Malays in non-residential schools who sat for MCE in 1983 (Tables 4.33 and 4.34). Therefore, the residential schools provide Malay students with an effective avenue to higher education; though catering to only 19% of Malay secondary school students, these schools have provided 59% of all Malay graduates.

Students from residential schools make up an increasing portion of Malay representation in science related schools. In 1983, they constituted 59.4% of Malay science graduates; in 1986, their proportion increased to

80.5%, and in 1989 to 89.0% (Table 6.49). In another interesting pattern, the students from residential schools were also entering arts related schools, comprising 10.6% of arts graduates in 1983, 5.1% in 1986, and 14.5% in 1989. Therefore, the residential schools significantly reduced not only the proportion of Malays with HSC/STPM in non-residential school in science, but also began to expand in arts related schools.

3. The low academic achievement in MCE and HSC/STPM among Malays in science classes led the local university authorities to establish a special education program - the Matriculation Program - to prepare Malay students for science related schools. Students with good grades in science subjects in MCE were admitted to the program. When this program was established in 1970, there were 183 students; the number increased to 1,001 in 1983 (Table 4.40).

The graduates from this program, together with graduates of HSC/STPM, as well as other equivalent diploma holders are eligible for admission to the university. However, since the matriculation program is administered by university authorities, the graduates of this program were admitted directly by the sponsoring universities

without being processed by the central University Admission Unit that processes applications made by those who have HSC/STPM and diplomas. The matriculation program, a strategy that falls under the preferential policy in education, has had a greater impact on the admission of Malays into local universities. From 1979 to 1985, 2,529 students from the matriculation program were admitted into nine science related schools in the University of Science, Malaysia (Table 5.18). Their annual intake increased from 180 in 1979 to 342 in 1982, and to 523 in 1985 (Table 5.18). In a comparison of the types of academic entry qualifications of the 3,784 Malay graduates in the case study, 40% were from the matriculation program, 48% from HSC/STPM, and 12% from other types of qualifications (Table 6.5). Another significant impact of this program is that 67.7% of the Malay science graduates were from the matriculation program, compared to 26.5% from HSC/STPM (Table 6.42). Of Malay graduates between 1982-1988, 39.6% were from the matriculation program, while in the 1989 graduation class, 57.3% were from this program. The increasing proportion of Malays from the matriculation program reflects a decline of Malay graduates with the HSC/STPM qualification, from 94.6% in 1970-1980, to 48.0% in 1982-1988 and to 38.8% in 1989

(Table 5.34). Thus, the majority of Malay graduates in 1989 were from the matriculation program, and the possibility of more Malay graduates from this program is strong. The impact of the matriculation program has been greater in science related schools, where students were scheduled to study. In 1983, 54.3% of science graduates were from the matriculation program, compared to 42.8% from HSC/STPM and 2.9% with other qualifications. In 1986, the proportions were 79.6% from the matriculation program, 15.0% HSC/STPM, and 5.4% others, while in 1989 the matriculation students constituted 88.3% of the science graduates, with only 7.9% from HSC/STPM, and 3.8% with other qualifications. As noted above, matriculation students also ventured into arts related schools, where they constituted 11.1% of Malay graduates in 1989 (Table 6.49).

4. The establishment of new schools and classrooms, and the improvement of the student-teacher ratio in rural areas (Tables 4.12 and 4.13) provided better educational opportunities for poor Malays, who constitute 70% of the rural population. The establishment of residential schools - - the government secondary schools and the MARA Junior Science College - - that cater to the best qualified

Malays from rural areas, provided a particularly effective ladder for educational mobility within Malay society. More Malays of low socioeconomic status and from rural areas gained admission to and graduated from the University of Science, Malaysia. There were 1,612 (42.6%) Malay graduates of low socioeconomic status in the case study, compared to 1,179 (31.2%) of middle and 545 (14.4%) of high socioeconomic status (Tables 6.7 and 6.8). Among the graduates from low socioeconomic status, 1,168 (39.9%) were farmers and unskilled laborers. Of the Malay graduates with low socioeconomic status, 1,356 (56.3%) came from rural areas, 327 (60%) and 587 (49.8%) of those with high and middle status, respectively, who came from urban areas (Table 6.21). There has been a steady pattern of improvement in the representation of Malays of low socioeconomic status. In 1978-1980, they represented 40%, but in 1982-1988 they constituted 42.7%, and in 1989, 50.4% (Table 6.32).

Although there has been remarkable educational mobility among poor Malays and among the Malays in rural areas, the Malays in developed states (57.5%) had an edge over those in the less developed states (42.5%) (Table 6.29). Fifty-six percent with high socioeconomic status and 64.8% with high and middle status came from developed

states. Among those with low socioeconomic status, the difference between the developed and less developed states was slightly less, at 50.8% and 42.6%, respectively.

5. In the labor market, graduates from science related schools have better opportunities for higher scale employment. Therefore, a greater number of Malays from low socioeconomic status being able to graduate in science related subjects should mean better jobs and better social mobility for Malays. There were 874 (40%) Malay science graduates who were of low socioeconomic status, compared to 718 (32.8%) and 354 (16.7%) of middle and high status, respectively.

Among arts related Malay graduates, the low socioeconomic status group constituted 46.2%, compared to 28.8% and 11.3% of middle and high status, respectively (Table 6.28).

6. The awarding of financial assistance benefited 299 (92%) of the Malays from the low socioeconomic groups in 1987-1988 (Table 6.46). Malays of this group received 38.7% of scholarships, compared to 35.3% and 15.5% received by middle and high status students, respectively. The distribution of financial loans also favored the low



socioeconomic group, with 37.9% going to these students, compared to 31.8% to middle status and 15.2% to high status students.

7. The implementation of the preferential policy brought about changes in the gender composition in higher education within Malay society. There were 1,466 (38.7%) Malay female graduates and 2,318 (61.3%) Malay male graduates in the case study (Table 6.38). In the science related schools, the females constituted 40.6%, and in the arts related schools, 36.2%.

The educational opportunities for female Malays are increasing. In 1978-1980, they comprised 23.7% of Malay graduates, but in 1982-1988 they constituted 38.7%, and in 1989 they totaled 48.3% (Table 5.32). Their proportion in 1989 (48.3%) almost matches the gender distribution of the Malay population - - 50.3% female and 49.7% male. However, compared to non-Malays, the proportion of Malay female graduates (40%) in 1982-1988 was lower than that of Chinese females (43.7%), but slightly higher than that of Indian female graduates (39.8%) (Table 5.29).

8. Employment in the public sector is not uncommon among Malays (Chew, 1989, and Cheong et.al., 1987). The

choice of employment sectors showed that Malay graduates preferred the public sector more than did the non-Malays. Among the 2,812 graduates from the University of Science listed as employees in the public sector, 51.4% (1,445) were Malays and 48.6% (1,367) were non-Malays (Table 6.51). Among Malay graduates employed in the public sector, 43% were from the low socioeconomic group, 32% from the middle and 25% from the high status group (p. 498-499). With respect to place of residence, 60.8% of these Malays came from rural areas, and 39.2% from urban areas. Since most of the public sector establishments, except for schools, are in urban areas, we can conclude that 60.8% of those Malay graduates who were from rural areas have migrated to urban areas, and the 32% who were from middle class backgrounds experienced upward social mobility, and the 43% from lower socioeconomic status did likewise.

Analysis of 36 Malay graduates employed in the private sector indicated that a substantial percentage of Malays from rural areas (33.3%) and from low socioeconomic groups (28%) entered this sector. This is an encouraging phenomenon, for in 1970, the proportions of Malays from rural and low socioeconomic status entering the private sector were quite low (p. 500).

Overall findings, indicate that a greater number of Malays, especially from rural areas and from the low socioeconomic class, benefited and experienced social mobility as a result of preferential treatment in education.

### 7.3 IMPLICATIONS

The preferential policy in education has narrowed the wide gap between Malays and non-Malays, not only in the proportion of their enrollment in higher education, but also in science-and-technology-related schools. It has been able to generate more acceptable proportions, reflecting the ethnic composition of the population. Under the preferential policy in education, poor and rural Malays experienced upward mobility. This would reflect the conventional or liberal view that education serves as a significant catalyst for social mobility. For underprivileged Malays, more education means greater opportunity to obtain better income-earning jobs, if one assumes that education is an effective mechanism, when tailored properly, for pulling poor children out of a disadvantaged situation, or for breaking the vicious cycle of poverty. It has been shown that a larger proportion of

Malays in the case study came from poor families and from rural areas. However, in a closer examination of Malays who were chosen to study at foreign universities - - education which carries better market value, and commands higher social status - - the majority of them came from high and middle social groups. In 1987, out of 684 Malays who were chosen to further their studies in overseas institutions, and received financial assistance, 37.1% were of high social status, 33.0% of middle and 29.8% of low status (Malaysia, 1988, Public Service Department). In this case, educational opportunities bring better benefits to the upper social strata of Malay society. If the above student data are assumed to reflect the distribution of educational opportunities in overseas studies, then one can also infer a causal relationship: the upper strata of Malay society leave the local universities to gain advantages from educational opportunities at overseas institutions. In this sense, educational patterns are reinforcing the existing inequalities in the Malay society, whereby the elites monopolize the better educational opportunities, leaving the less prestigious to the lower classes.

The implementation of a quota system - - 55:45 for Malays and non-Malays, respectively - - has left the non-

Malays with limited places in local universities. Since higher education is very important to social mobility, especially in the Chinese culture, an increasing number of Chinese have sought higher education at foreign universities which do not apply preferential treatment. In 1980, there were 11,533 Chinese in foreign educational institutions, and in 1985 this number increased to 13,406 (Table 4.45). Since foreign education is costly, and government financial assistance to the non-Malays is limited - - awards are made to one non-Malay for every six Malays - - the non-Malays who are admitted to foreign institutions are from wealthy families. Those non-Malays who cannot afford foreign education are left to compete for the 45% of allocated places in local universities, or to enter the labor market. As a result of the proportional displacement of non-Malays, growing numbers of private educational institutions are established to help these non-Malay students pursue further studies at foreign universities.

Over the years, an increasing number of Malay students from residential schools have been admitted to local universities; on the other hand, the number of Malay students from non-residential schools has declined rapidly. In addition, Malay students from the

matriculation program are admitted directly into local universities, and as their number increases, the Malay students from HSC/STPM have fewer chances for admission. Since the number of students admitted to these residential schools and to the matriculation program is small, admission to these schools and to the program is highly competitive: less than 10% of applicants are admitted annually. The "success" of the residential schools and the matriculation program in producing adequate Malay candidates for university admission led the government to establish more residential schools, and led the local universities to extend the matriculation program, with the objective of providing better opportunities for poor Malays and Malays from rural areas (Fifth Malaysia Plan, 1985-1990, p. 490). In fact, one residential school, the Cheras Science Residential School in Kuala Lumpur, is to admit only poor Malays (Ministry of Education, 1988).

From an ethnic perspective, Malaysian education displays two faces - - the public and the private. The public face is the official visage that the government prefers to portray. Since the majority of members in the Federal and State's government are Malays, the public vision is often regarded as the Malay view. The private face reflects vexing political tensions that mark the

nation's ethnic relations. The public face displayed in speeches and publications accorded official approval, gives the impression that the country's multi-ethnic polity is unanimous in supporting the government's policy to mold a unified, just and prosperous nation by redressing imbalances among the major ethnic groups. The difficulties that are publicly recognized in pursuit of this objective are technical, not ideological. Every ethnic political and cultural organization appears not to disagree with the goal of compensating the Malays for past injustices, and supports the educational strategies for achieving it. The notion that there might be significant dissatisfaction on the part of non-Malays with either the goal or strategies goes almost unmentioned in government-approved publications about education (Wong, 1975; Aziz and Chew, 1988).

The private face, often synonymous with the view of Chinese and Indians who are distressed over the government's preferential policy, reveals questions about both long-term and short-term outcomes and consequences. In the case of long-term outcomes, one asks: How far does the (Malay-controlled) government intend to carry the preferential policy to compensate for past injustices Malays suffered? Will the favored preferential treatment

(the quota system) cease when average Malays, Chinese and Indians enjoy about the same level of socioeconomic welfare? Or will the policy become a permanent fixture of the society as the "special position of the Malays" and "Malay rights" as defined in Article 153 of the Constitution? Given the political forces at work, Malay political leaders seek to woo segments of the electorate by promising the continuation of the preferential policy; at the same time, non-Malays call for the termination of the policy, and for equal treatment for all. On August 31, 1989, the Prime Minister announced that the preferential policy, which comes under the New Economic Policy, "achieved only 60% of its target" (The New Straits Times, Sept. 1, 1989). The policy will therefore be incorporated into the next ten years' (1991-2000) planning.

One may ask why implementation of the policy has progressed somewhat peacefully, without strong open opposition from the large non-Malay sector of the population. One answer, proposed by Maryanov (Snider, 1973: 3-4), is the "eggshell syndrome" or the "shared value of sensitivity to intercommunal tensions" that leads opponents "... not to go beyond the limits of permissible differences with the implicit threat of the destruction of the whole society." Another likely reason for the peaceful



progress of the preferential treatment of Malays in the realm of education, particularly higher education, is that schooling opportunities in general have been expanding rapidly, so that in absolute numbers more Chinese and Indian youths were attending schools and higher institutions by 1985 than in 1970. Non-Malay parents now have more openings for their children in schools and employment than were available in earlier times. However, non-Malays fear not only possible long-term consequences of the present government policies, but also the immediate consequences for their children. How widely and deeply these concerns are felt is unknown, for no attitude polls have been conducted.

One clear indicator is that an increasing number of non-Malays, though the actual number is unavailable, have migrated to Australia, New Zealand and Canada, where educational opportunities are not tied to ethnic origin. Another reaction, especially in response to the rising discontent of Chinese parents about the limited places allocated to them in tertiary education in the country, is that of Chinese community leaders, who proposed the establishment of a private university in 1978, to help relieve the shortage of university places for the younger Chinese generation. The petition for a charter to

establish the proposed university was rejected by the government, and later dismissed by the high court in 1982.

From the Malay perspective, the program is succeeding nicely. By 1985, far more Malays were in school at all levels of the educational hierarchy than ever before. At the tertiary level, in particular, Malays are coming to dominate the enrollment. Another important change is that Malay girls are obtaining upper and higher education in significantly larger numbers than before. An increasing number of Malays in science and technological studies are prepared for jobs in the modern industrial segment of the society, in which they had traditionally been weak.

In short, the preferential policy to correct past injustices to Malays in the educational and economic system, and to provide social mobility within Malay society is progressing as planned. It appears that before long, economic parity among the ethnic groups may well be achieved, and the poverty level among the Malays may well be considerably reduced.

#### 7.4 IMPLICATIONS FOR FURTHER RESEARCH

The findings reported in this study address the efficacy of managing upward social mobility via education,

which touches directly on the question of poverty reduction. Interesting and important as the findings are, they must be somewhat qualified by the fact that the data were gathered for a case study at one higher education institution, excluding at least six others. Therefore, it is suggested that a comprehensive, national level study on the impact of the preferential policy on the social mobility of all ethnic groups attending tertiary institutions.

Another limitation of this study is that the information on which it is based was not obtained directly from the Malay students themselves, who are the unit of analysis, but solely on the information recorded on their personal records at the University of Science, Malaysia, which are often incomplete. This may have affected the validity of the information. To obtain more precise data, it would be necessary to obtain the details from the subjects themselves. This should be another consideration in future research.

One important problem that has not been raised fully by this research is that of the relationship between social mobility and other features of the social structures within Malay society at large in the context of the preferential policy. Social factors, such as

aptitudes, awareness, attitudes, social conditions, social discrimination or job opportunities, are at work. Perhaps, as Isahak (1977: 183) observes, changes in mobility are partly due to the emergence of a modern social class consciousness.

The establishment of residential schools and the matriculation program, and the recent government intention to expand these programs have reduced opportunities for students, both Malays and non-Malays, in non-residential schools and HSC/STPM certificate holders seeking admission to higher education. This area needs to be researched, though this is a formidable task for social scientists.

#### 7.5 CONCLUDING REMARKS

Education may be used as a mechanism to maintain class stratification in some countries, while in others it may be a strategy to break down social barriers. In Malaysia, where education is planned to bring about Malay social mobility, it is seen as an important and effective vehicle for uplifting the poor from poverty, and thus breaking down social barriers. The revisionist theory that alleges a weak relationship between education and social mobility has not been sustained for Malays, as revealed

by this study. The larger portion of poor Malays, especially from rural areas and less developed states, benefited the most from the preferential policy in general, and in higher education in particular. They have advanced in the social structure, and otherwise would not be in the positions they now occupy. However, we must not lose sight of the fact that this successful group constitutes only 2.0% of the total children of poor Malays, and that 98% of the children of poor and rural Malays are still trapped in the vicious poverty cycle.

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