

Thesis  
3012

**EARLY EMPLOYMENT OUTCOMES OF HOME  
VERSUS FOREIGN TRAINED GRADUATES - A  
MALAYSIAN EXPERIENCE**

**A THESIS**

**SUBMITTED IN FULFILMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY  
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**BY  
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## ABSTRACT

### EARLY EMPLOYMENT OUTCOMES OF HOMES VERSUS FOREIGN TRAINED GRADUATES - A MALAYSIAN EXPERIENCE

This study compares the early employment outcomes of Malaysian graduates who are trained locally versus those who were trained abroad, specifically in universities in the United States and United Kingdom. The study examined the employment outcomes in terms of level of income and job satisfaction. A total of 408 graduates were surveyed for the study. The respondents who were selected randomly nation wide were of similar major of studies.

One of the objectives of the study was to find out whether the amount of money spent to train student abroad which can cost up to four times the cost of training students locally is justified.

Early research reported that in developing countries, foreign trained graduates were accorded higher income when compared to their counterparts who were trained locally. However, this study indicated that location of study was not significant in explaining the variation of income of graduates.

Using regression techniques, the differences in income level was found to be significantly explained by the following variables; gender, job duration, self-esteem, employers' ownership, academic majors and English proficiency.

It was also reported that both cohorts of graduates were equally satisfied in their jobs. It was interesting to note that female graduates were also satisfied in their jobs despite earning less than the males graduates. Job fit index, self-esteem, income, specific self-esteem and satisfaction with university facilities, were found to be significant in explaining the differences in job satisfaction.

The study also compared the attributes and experiences of the two cohorts in terms of socio economic and high school background and university and job experiences. It was also reported that there is upward social mobility of graduates as a result of the heavy investment in higher education.

The results of the study could be seen as useful, first, to the policy makers in making the right decision in some aspects of investing a large amount of money in higher education. Secondly, to potential university students in Malaysia, the study will help them to plan their academic careers to suit their future employment opportunities.

*This thesis is specially dedicated to my late parents  
who never went to school but who understood the  
value of education.*



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## CHAPTER 1

### INTRODUCTION

#### 1.0 PROBLEM DESCRIPTION

Malaysia is undergoing intense economic transformation and is fast entering an era of rapid industrialisation. Industrialisation will continue into the 21st century placing new demands on high level technical skills, management and entrepreneurial capabilities, as well as, increased technological development and improved capital utilisation. To support and sustain this process, Malaysia must develop a disciplined work force with a broader skill base, equipped with a positive work ethic.

Local institutions are responsible for preparing an adequate number of skilled professionals. The demand for higher education has always surpassed the number of available places in local institutions. Table 1.00 indicates that in selected fields the local institutions will not be able to meet the estimated employment demand for 1991 - 2000. In engineering alone a shortage of approximately 10,000 graduates will exist.

For many years (Malaysia, 1991) Malaysian students have been studying in foreign institutions. In 1985 about 60,000 students were enrolled in overseas tertiary educational institutions, of whom about 43,200 were enrolled in degree level courses and the remainder at



diploma, certificate and school levels. In 1990, the total enrollment of Malaysian students abroad declined to about 52,000. The reduction in the number of students pursuing tertiary education abroad was the result of higher fees imposed by overseas institutions and the increasing number of students completing a part of their overseas education in local institutions through articulation arrangements. In this arrangement, students are allowed to collect part of the credits in the home institution before completing their baccalaureate degrees in universities abroad.

Present trends show that the cost of pursuing studies abroad is likely to escalate in the future. News and World Report (Sept. 30, 1991) in an article comparing the quality of universities in the United States, reported that the escalation of costs in operating universities will eventually be borne by the student in the form of higher tuition fees. Table 1.01 compares the cost of studying in a few western countries abroad with the cost of studying at local institutions.

Table 1.02 indicates the comparison of operational cost per student (fees alone - except for MARA Institute of Technology) in running various academic disciplines in Malaysia public universities (Malaysia, 1994). The students may need add up to RM5000 per year for their food, lodging and book expenses.

An important facet in the development of human resources is the provision of opportunities for all Malaysians to participate actively and equitably in the economic life of the nation. In the process of restructuring Malaysian society, education and training programmes will

TABLE 1.00 CAPACITY OF LOCAL INSTITUTIONS  
TO MEET THE DEMAND FOR SELECTED PROFESSIONAL AND TECHNICAL OCCUPATIONS 1991 - 2000

| Occupation                                 | Stock<br>1990 | Employment<br>2000 | Output (1991 - 2000) 1       |                 |                  |
|--|---------------|--------------------|------------------------------|-----------------|------------------|
|  |               |                    | Net<br>Increase<br>1991-2000 | Local<br>Public | Local<br>Private |
| <b>ENGINEERS</b>                           | 26,500        | 56,600             | 30,100                       | 21,000          | -                |
| Civil                                      | 11,100        | 19,500             | 8,400                        | 3,700           | -                |
| Electrical &<br>Electronic                 | 6,200         | 14,600             | 8,400                        | 4,200           | -                |
| Mechanical                                 | 5,200         | 10,800             | 5,600                        | 4,000           | -                |
| Chemical                                   | 800           | 2,000              | 1,200                        | 900             | -                |
| Others                                     | 3,200         | 9,700              | 6,500                        | 8,200           | -                |
| <b>ENGINEERING ASST.</b>                   | 72,400        | 195,300            | 122,900                      | 84,070          | 20,900           |
| Civil                                      | 27,100        | 58,500             | 31,400                       | 20,400          | 600              |
| Electrical &<br>Electronic                 | 32,300        | 75,900             | 43,600                       | 21,200          | 8,000            |
| Mechanical                                 | 6,400         | 32,400             | 26,000                       | 11,600          | 9,600            |
| Chemical                                   | 600           | 6,000              | 5,400                        | 570             | -                |
| Others                                     | 6,000         | 22,500             | 16,500                       | 39,300          | 1,900            |
| <b>MEDICAL &amp; HEALTH</b>                | 1,600         | 17,600             | 6,000                        | 6,200           | -                |
| Physicians &<br>Surgeons                   | 7,900         | 12,300             | 4,400                        | 4,600           | -                |
| Dental Surgeons                            | 1,700         | 2,200              | 500                          | 700             | -                |
| Pharmacists                                | 2,000         | 3,100              | 1,100                        | 900             | -                |
| <b>MEDICAL &amp; HEALTH<br/>ASSISTANTS</b> | 47,300        | 57,400             | 10,100                       | 5,660           | 1,050            |
| Mecial & Lab.<br>Med. Asst.                | 9,500         | 13,000             | 3,500                        | 1,000           | -                |
| Dentists & Dental<br>Nurses                | 2,000         | 2,700              | 700                          | 200             | -                |
| Pharmaceutical<br>Assts.                   | 1,500         | 2,400              | 900                          | 360             | -                |
| Professional Nurses                        | 34,300        | 39,300             |                              |                 | 1,050            |
| <b>SCHOOL TEACHERS</b>                     | 117,600       | 252,500            |                              |                 | -                |

Notes:

1 Output does not include graduates from education and training institutions overseas.

Sources: Malaysia (1991), The Second Outline Perspective Plan, 1991-2000, pg. 167

TABLE 1.01 Cost of Higher Education - Acquiring a First Degree in the UK, Australia and the US Between 1992 - 1995

| 1. WITHOUT SPLIT DEGREE ARRANGEMENT |                                 |         |                                    |        |                             |         |
|-------------------------------------|---------------------------------|---------|------------------------------------|--------|-----------------------------|---------|
| INSTITUTIONS                        | UNIV. IN THE UK<br>3 YRS DEGREE |         | UNIV. IN AUSTRALIA<br>3 YRS DEGREE |        | UNIV. IN US<br>3 YRS DEGREE |         |
| DURATION                            | Expenditure                     |         | Expenditure                        |        | Expenditure                 |         |
|                                     | £                               | RM      | A\$                                | RM     | US\$                        | RM      |
| Year 1                              | 9,000                           | 40,500  | 16,500                             | 33,000 | 16,000                      | 41,600  |
| Year 2                              | 9,200                           | 41,500  | 16,500                             | 33,000 | 16,000                      | 41,600  |
| Year 3                              | 9,500                           | 42,750  | 16,500                             | 33,000 | 16,000                      | 41,600  |
| Year 4                              | -                               | -       | -                                  | -      | 16,000                      | 41,000  |
| TOTAL                               | 27,700                          | 124,650 | 49,500                             | 99,000 | 64,000                      | 166,400 |
| 2. WITH DEGREE ARRANGEMENT*         |                                 |         |                                    |        |                             |         |
|                                     | 1 PLUS 2                        |         | 2 PLUS 1                           |        | 2 PLUS 2                    |         |
| Year 1                              | 3,600                           | 16,500  | 9,000                              | 18,000 | 5,000                       | 13,000  |
| Year 2                              | 9,200                           | 41,400  | 9,000                              | 18,000 | 5,000                       | 13,000  |
| Year 3                              | 9,500                           | 42,750  | 16,500                             | 33,000 | 16,000                      | 41,600  |
| Year 4                              | -                               | -       | -                                  | -      | 16,000                      | 41,600  |
| TOTAL                               | 22,300                          | 100,650 | 34,500                             | 69,000 | 42,000                      | 109,200 |
| Overall Net Savings                 | 5,400                           | 24,000  | 15,000                             | 30,000 | 22,000                      | 57,200  |
| % of Saving                         | 19.25                           | 19.25   | 30.0                               | 30.0   | 35.0                        | 35.0    |

NOTE: If 3 Plus 1 for US universities, Total Cost Saving = RM 85,800 OR 51.5%.

Source: Chan Chee Seng of Stamford College - STAR, Feb. 17, 1993.

\* Up to date of publication Feb. 17, 1993, most UK universities require 2 years of studying in UK and a number articulation arrangement with Australian universities require only 1 year studying in Australia. Most articulation arrangements with USA universities require an average of two years of studying in United States.



Table 1.02 A Comparison Of Operational Cost<sup>1</sup> per Student in Malaysian Public Higher Institutions 1992/1993

| FIELD                       | COST PER STUDENT (RM) |           |           |           |           |           |          |          |  |  |
|-----------------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|--|--|
|                             | UM                    | UKM       | USM       | UTM       | UPM       | UIA       | UUM      | ITM*     |  |  |
| ARTS                        | 9,310.00              | 10,149.00 | 8,280.00  |           |           | 9,188.00. |          |          |  |  |
| APPLIED ARTS (PROFESSIONAL) | 10,313.00             | 10,994.00 | 9,602.81  | 9,468.65  | 8,302.19  | 8,951.33  | 4,803.75 | 9,049.61 |  |  |
| TECHNOLOGY                  | 11,732.00             |           | 14,314.00 | 14,182.30 | 12,414.70 |           |          | 9,245.57 |  |  |
| SCIENCES                    | 10,929.00             |           | 13,110.79 | 10,134.81 |           |           |          | 9,504.10 |  |  |
| MATRICULATION               |                       |           | 5,141.81  |           |           |           |          |          |  |  |
| APPLIED SC.                 |                       | 18,242.00 | 9,160.36  | 14,333.73 | 11,454.18 |           |          |          |  |  |
| PHARMACY                    |                       |           | 15,911.98 |           |           |           |          |          |  |  |
| DENTISTRY                   | 19,641.00             |           |           |           |           |           |          |          |  |  |
| MEDICINE                    | 26,268.00             | 45,248.00 | 50,015.58 |           |           |           |          |          |  |  |
| VETERINARY MEDICINE         |                       |           |           |           | 17,869.34 |           |          | 9,903.46 |  |  |

\*Inclusive of food and lodging UM = Univ. of Malaya  
 UKM = Univ. Kebangsaan Malaysia  
 USM = Univ. Sains Malaysia  
 UTM = Univ. Teknologi Malaysia  
 UIA = International Islamic Univ.  
 UUM = Univ. Utara Malaysia  
 ITM = MARA Institute of Technology  
 UPM = Univ. Pertanian Malaysia

<sup>1</sup> : All operational cost except for development cost like building new buildings, campus etc.  
 Source: Ministry of Education Malaysia - Higher Education Division

accompany on going efforts to redress inequalities in incomes, employment, and the ownership and control of productive resources among ethnic groups. In Malaysia a unique situation exists in which political control is exercised by the least advanced ethnic group in terms of economic power and educational background. Malaysia's population of 18 million in 1990 (Malaysia, 1991) is 53% native Bumiputera (literally translates as "sons of soil"), 35% Chinese and 12% largely Indian and others (New York Times Magazines, Nov. 17, 1991). The Bumiputera community is still under-represented in certain occupational groups and key professions despite efforts made during the past 20 years to correct the imbalance (Malaysia, 1991). In that period in the effort to eradicate poverty, the Bumiputera community has been given privileges in terms of acquiring education, especially higher education.

Approximately 30% of Malaysian students studying abroad are from the Bumiputera community, with the majority being sponsored by the federal government. Decisions must be made whether or not to continue sponsoring students for overseas training. The reasons for continuing the current policy of sponsoring some students to study in overseas institutions, especially the Bumiputra, at the baccalaureate level are as follows:

- i. Local institutions cannot accommodate the demand for higher education (see Table 1.00)
- ii. There is a need to expose students to the latest technological advancements in order to reduce the technology

gaps in the country and at the same time to expose them to the cross-cultural awareness that will facilitate their employment in the private sector. Cross-cultural awareness is more critical since the government is pursuing a policy of privatization, and more multinational corporations are investing in the country.

- iii. It is not healthy for the social fabric of the nation if a dichotomy exists where Bumiputera students are trained mainly in the local public institutions while the non-Bumiputera students are mainly trained either in the private institutions or overseas. The non-Bumiputera students are in a better position to obtain overseas training because of their economic superiority. Table 1.03 shows the estimate of distribution of students in different types of institutions.

Table 1.03: Estimates of Number of Malaysian Students Enrollement Higher Institutions in 1993<sup>1</sup>

| Types of Higher Institutions     | Bumiputera | Non-Bumiputera |
|----------------------------------|------------|----------------|
| Private Institutions             | 13,985     | 125,871        |
| Government's Public Institutions | 48,032     | 39,299         |
| Foreign Institutions             | 12,760     | 30,140         |
| ITM (Public)*                    | 43,792     | -              |
| Total                            | 118,469    | 195,310        |

Note \* Only 23% of ITM students enrolled in degrees programs. The remainders enrolled either in certificate of diploma programmes.

<sup>1</sup> Source: the office of MARA Institute of Technology (ITM)'s Directorate.



No study has yet been carried out to specifically compare the performance of the Bumiputera graduates in the employment market, who were trained in different countries. If such a study produced data showing the advantage of overseas training versus local training, then the policy of sponsoring Bumiputera students in higher institutions abroad should be continued. However, should evidence indicate that no substantial differences exist in terms of performance between overseas and home-educated graduates, then there is justification to re-examine the current policy and the possibility of re-directing the resources to reinforce or build more local academic institutions. Another alternative would be to follow the policy of other developing nations in sending only post-graduate students for studies overseas.

Malaysia has spent a considerable amount of money in sending students to overseas institutions. Apart from the inadequacy of places in the local institutions, various reasons contributed toward having Malaysian students studying abroad. A survey conducted by Kiong (1982) which compared the productivity of foreign and local graduates both in private and public sector employment in Malaysia, gave a premium to foreign graduates. Goodman (1983), in his study of the perceptions of Malaysian society towards the quality of institutions, indicated that institutions in the developed Western nations were preferred over local institutions.

Kiong (1986) described the Malaysian employers' perspective of the functions of higher education. Using recruitments criteria the employers were examined for their preferences on the attributes of graduates.

The public sector was reported to prefer higher academic records whereas the private sector placed importance on work experience and affective skills. However, both see the primary role of the university as that of developing problem solving abilities rather than imparting specific skills. Bowles and Gintis (1976) argued that effective job performance depends on certain personality traits or affective skills. Emphasis should be given to the development of ... "self esteem, self reliance, versatility and the capacity to assume leadership roles", (Blaug 1985, pg. 19). Students must be exposed to teaching methods which encourage them to think, solve problems, and apply knowledge rather than merely receive facts (Singh, 1985). According to Lim (1974), Malaysian universities are structurally based on the British systems. Unfortunately there is a tendency of Malaysian universities to promote learning by rote. Students are oriented towards memorisation and close reproduction of facts and details rather than towards understanding interpretations. Perhaps learning by rote that is associated with local graduates may partially explain the premium granted by both public and private sectors employers to graduates of Western institutions, (Kiong 1982).

## **1.1 RESEARCH OBJECTIVES**

The study of comparison of early employment outcomes of home versus foreign trained graduates in Malaysia is designed to achieve the following objectives:

1. To differentiate the outcomes of education measured by level of income and job satisfaction of two cohorts of graduates who were trained locally and in foreign institutions.
2. To find out the characteristics and the profile of the two groups of graduates in term of socio-economic background, education experience and attainment and job experiences.
3. To relate different characteristics or variables of the two cohorts of graduates that may explain the differences in level of income and job satisfaction.
4. To provide recommendations concerning types of education experiences that are economically and socially commensurate with the different level of expenditures in sponsoring students in higher institutions.

## 1.2 JUSTIFICATION OF THE RESEARCH

It is hoped that this study will provide some empirical evidence to justify the present policy of sponsoring Malaysian students to attend Western institutions. If some predictors could be established in explaining the success of early employment situation, the policy makers may be able to be selective in deciding which categories of students that should be sent overseas to ensure the infusion of the latest technology to the country's effort in industrialization. At the same time using the



predictors, the policy makers could use selective attributes of the students to reinforce the existing local institutions and to build more institutions that encourage and develop these positive attributes. The other alternatives would be for Malaysia to follow other developing countries in sponsoring only graduate students to study at foreign institutions.

### **1.3 SUMMARY**

Human resource development has always been a major thrust in the country economic development. An achievement of socio-economic objectives depends on the availability of educated, skilled and trained labour force.

The country's National Development Policy attributed a very high priority to education and training since these factors contributed significantly to the nation's objectives, particularly in poverty eradication and restructuring the society. It is envisaged that providing greater access to education and training to those in the low income group will increase their income and employment opportunities and contribute further to improvements in income distribution (Malaysia, 1991).

It is the aim of this study to determine whether spending a substantial amount of money in education, in particular sponsoring students in Western universities at a considerable cost, is justified. The justification is not so much whether studying abroad would increase students' income, but would be more in terms of comparing employment attainment of these graduates to their colleagues who were trained locally.

The study also compared the socio-economic background, academic and working experiences of the two groups of students and to give some empirical data that support education in general, does improve income distribution. More importantly the study tried to establish whether the scholarship policy which provided greater access to education for low income Bumiputra group is successful.

Employment attainment of level of income and job satisfaction were chosen as the basis for comparing the performance of the two groups of students. The study would also gave some insight as to what are the variables that explain the differences in income level and job satisfaction among the graduates.

## CHAPTER II

# LITERATURE REVIEW

### 2.0 INTRODUCTION

The main purpose of this chapter is to review the literature related to the outcomes of education and their relationships to the research topic which compared the employment outcomes of home trained and foreign trained graduates.

The research on the impact of college on students proliferated over the last decade due to increasing costs of college attendance and operations plus mounting criticism of the quality of undergraduate education (Pascarella & Terenzini, 1991). Apart from the thousands of articles published separately worldwide, there are several books on reviewing and synthesising these articles. A classic example of this kind of work is a book called "The Impact of College on Students" by Kenneth Feldman and Theodore Newcomb published in 1969. The latest major review on similar issue is the work by Pascarella and Terenzini, 1991 entitled "How College Affects students".

In addressing the research topic "Early employment outcomes of home versus foreign trained graduates - a Malaysian experience", it is very appropriate to adopt and adapt the six critical questions posed by Pascarella & Terenzini, 1991. Their six critical questions are:



1. What evidence is there that individuals change during the time in which they are attending college? A shorthand expression for the question will be "Change During College".
2. What evidence is there that change or development is the result of college attendance? This question focuses on the extent to which whatever change does occur can be attributed to college attendance rather than other influences (for example, normal maturation, differences in background, traits between those who attend and do not attend college).

The shorthand label for this questions will be "Net Effect of College",

3. What evidence is there that different kinds of post secondary institutions have a differential influence on student change or development during college? This question asked whether or not discernible difference in student development or the outcomes of college are attributed to the characteristics of the particular institution attended (institutional type, student body selectivity, size, financial resources etc.). The shorthand phrase for this question will be "Between College Effects".
4. What evidence exists on effect of different experiences within the same institution? This question is concerned with identifying different subenvironments, or experiences

within the institution (for example, residence arrangement, academic major, extracurricular activities, part time working experiences etc.) that may have influences on student's change or development. The shorthand expression will be "Within College Effects."

5. What evidence is there that the collegiate experience produces conditional, as opposed to general effects on student's change or development? This question asks whether college experiences vary in their influence for different kinds of students (eg. men versus women, different races, low versus high-aptitude students etc.). The shorthand label used is "Conditional Effects of College".
6. What are the long term effects of college? This question addresses the durability or permanence of the collegiate experience on students post college activities, attitudes, beliefs & behaviours, The shorthand phrase will be "Long Term Effect of College".

All these questions are relevant in addressing the research problem of comparing the outcome of college between two cohorts of graduates. It is admitted that when looking at the long term effect, the period may not be long enough since the respondents selected were recent graduates, i.e., those graduates who left college as early as 1989 and as late as May 1992. The survey for the research was carried out in late 1992.

The main purpose of this chapter is to review in general the literature pertaining to the six questions and to focus especially to questions 3, 4, 5, and 6 to investigate the different effects between college, within college and conditional effects of college to the kind of graduates produced.

## 2.1 DEPENDENT VARIABLES

Various measures and characteristics were used to gauge change and development as a result of college education. Pascarella and Terenzini (1991) in their synthesis of the previous works identified numerous measures of outcomes which can be broadly categorised as learning and cognitive development, development in attitudes and values, psychosocial changes, moral development, socio-economic outcomes and finally quality of life indices.

The broad category of college outcomes which is very relevant to the research topic is the socio-economic outcomes. Pascarella and Terenzini (1991) identified that college education produced the following socio-economic outcomes: occupational status, stability of employment, career mobility and attainment, earning and private rate of return. The author decided to select earning or income as one of the measures of employment outcomes to compare the two cohorts of graduates. The selection of earning was done in response to the justification of problem statement of the research. In other words, earning was chosen to measure the economics of college education and a more spe-



cific reason to investigate the economic or justification of spending so much money on sending students to obtain foreign qualifications.

### **Income Level**

In spite of the view that education cannot be attributed to be the single factor that has a major impact on social stratification, many relationships have often been found between income and various aspects of college experiences. In United States, type of college has been shown to have an impact on earnings, independent of the backgrounds and abilities of students (Alwin 1976; Foster & Rodgers 1979; Solmon & Wachtel 1975; Weisbrod & Karpoff 1968, cited in Phelan & Phelan 1983; Mueller 1988, Leslie & Brinkman 1988; Bowen 1977 cited in Smart 1988). Phelan & Phelan (1983) studied the impact of higher education on different aspects of early life outcomes. Their research showed the positive impact on earning attainments and liberalism-conservation but not on later job and life satisfaction. Smart (1988) confirmed the importance of the institution of higher learning to the income level of the graduate even when controlling for a wide range of precollege and post-baccalaureate experiences.

The idea of perfect competition is central to much of economic theory, even though it is generally agreed that no market is perfectly competitive. The notions of internal labour market and segmented labour market reinforce imperfect competition. Economic theory postulates that if the labour market was perfectly competitive, wages would equal the values of the workers' marginal product, earning differential would be a



precise measure of increased productivity, and the extra earning of educated workers could therefore be used to measure their additional contribution to output. However, in the public sector of Malaysia, the institutional rigidities disturb the pattern of relative wages (Kiong, 1982). It does not matter how capable a person is or the different educational experience one has, initially one is subjected to the same predetermined salary scale for the equivalent credentials. This salary scale is operational for a number of years until the productive worker is singled out for promotion. In this study due to the nature of the population (i.e., those graduates who have been working for only a few years in the public sector) no relationship is expected between income and productivity. However, in the private sector where the salary scale is sensitive to productivity, variation is expected in income for graduates of different personal and educational experiences even if they have equivalent credentials. The issue to be looked at when comparing the early employment outcomes of the two groups of student is, which groups is more employable to both of the public and private sectors, and in what proportion the two groups are employed. As a consequence, the variation of income between the two cohorts could be determined.

The selection of income in early stage of employment as an indicator of productivity in the perfect job market has its shortcoming if one is to argue that some graduates may select initially a low paying job in anticipation to be able to draw a much better income in later part of their career. However, in Malaysian context except for few cases, the graduates who originated from disadvantaged socio economic background would opt for a well paid first job. Furthermore, the cultural

expectation that they have to contribute a portion of their income to their parents would influence their decision to start their career with the first well paid job.

## **Job Satisfaction**

In the same book Pascarella and Terenzini (1991) synthesise the other broad categories of college outcome done by the previous researchers. In this category previous researchers have looked into various outcomes of college ranging from health status, marital status, family size, consumer behaviour efficiency, marital satisfaction, etc. (see page 585).

It also included job satisfaction as one of the outcomes of college education and it was reported, in spite of the strength of evidence is weak, college education had a positive effect on job satisfaction.

In comparing the employment outcomes of the two cohorts, the author decided not only to investigate a measure of the economic aspect of it, i.e. income, but also the quality of the employment from the point of view of job satisfaction.

Job satisfaction is selected for this study because as an outcome measure, job satisfaction is conceptually similar to socio-economic status and income. Satisfying jobs are more desirable than those with fewer rewards. But job satisfaction is an intangible reward effected not only by structural job conditions but also by perceptions; individuals who

have the same job may report different levels of satisfaction (Kallerberg, 1977). According to Mottaz (1985), the concept of work or job satisfaction has occupied a prominent place in the social science literature for many years. Many studies have been conducted on job satisfaction and in fact Locke (1976) reports that over 3,300 articles have been compiled to date, and the number is increasing. One main reason for the tremendous interest in job satisfaction is the belief that job satisfaction affects workers' productivity, absenteeism, perceived desirability of staying turnover, and hence organizational effectiveness. Another reason for the popularity of the concept stems from the notion that work satisfaction may have serious consequences for the well being of the individual in terms of physical and mental health, and satisfaction with life in general.

However, despite the intensity of the research, there is no single, agreed upon definition of work satisfaction. How the concept is defined depends on the theoretical slant of the writer. Locke defined job satisfaction as the pleasurable emotional state resulting from the appraisal of achieving or facilitating the achievement of one's job values (Locke 1969). Locke goes on to describe dissatisfaction; job dissatisfaction is the unpleasurable emotional state resulting from the appraisal of one's job as frustrating or blocking the attainment of one's job values or as entailing disvalues. Thus, according to Locke (1969), job satisfaction and dissatisfaction are a function of the perceived relationship between one's job and what one perceives it as offering or entailing.

According to Rossano (1986) these definitions implied three



basic elements in the appraisal process of job satisfaction:

- (i) the perception of aspects of the job
- (ii) the imposition of a value standard
- (iii) the conscious judgement of the relationship between the perception and the standard.

Rossano (1986) states that when discussing job satisfaction, it is important to recognise that satisfaction involves the employee's perception of the job and its components and not the actual job and the components by themselves. From an individual perspective, job satisfaction is an attitude; attitudes have three characteristics: 1) cognitive - the clear description of something. 2) affective - the feelings of an individual toward something, and 3) behavioral - the intention to act toward something. The affective component of the attitude has attracted researchers' attention in describing job satisfaction. Dunham & Smith (1979) state that "job satisfaction included the set of affective reactions (feelings) of employees to the work environment".

Many other researchers use a personal model to explain the concept of job satisfaction (Yankelovich, 1979; Goldthrope, Lockwood, Beckhof & Platt, 1978). At the same time other researchers (Porter & Lawler, 1965; Burowoy, 1979) studied the nature of the job in explaining job satisfaction. However, many recent job satisfaction models include both individual and job related factors as predictor variables (Kallerberg, 1977; Janson & Martin, 1982; Miller 1980, Loscoco, 1989).



Dunham and Smith (1979) expanded the definition of job satisfaction by suggesting the notion of facets of job and satisfaction; ..."the affective component of attitude is usually complex. Accordingly, job satisfaction consists of a set of specific satisfactions called facets of satisfaction as they related to facets of the job. Typical facets of job satisfaction include policies, compensation, co-workers' relations, physical conditions of the environment, promotional opportunities, supervision, work amount and demand, and characteristics of the work itself" (Dunham & Smith, 1979), [cited by Rossano, 1986].

Different individuals react differently to different job facets. In most cases one dissatisfier is compensated by another satisfier. This study will use the definition by Locke that stresses the participation of the individual in assigning a valence or value standard to each aspect of the job. Comparison of the values of graduates who were trained locally or overseas will be made. However, it would be inaccurate to overlook the adaptation of values as the graduates deal with daily job situations, and the interaction between disposition and job situations to determine outcomes in terms of job satisfaction. Here one may argue the usefulness of selecting job satisfaction as an instrument for comparing the two cohorts of graduates, since one would not know how much the effect of job situation as compared to graduates disposition (after been exposed to different educational background) is affecting job satisfaction. However for purpose of comparing early employment outcomes, graduates' disposition play important roles in explaining variation of job satisfaction.

Due to the affective (emotional) nature, satisfaction was impossible to be observed directly. In fact criticism against previous findings and also the limitation of this research would be due to its rather personalised and subjective nature. Job satisfaction was measured through graduates' perceptions rather than by more objective observational techniques.

Relevant recent study on job satisfaction in Malaysian context especially among public sector employees was reported by Kamil, M.H (1993) through his Ph.D. thesis titled Overall Job Satisfaction Among Managerial Employees in the Public Services Department, Malaysia. Kamil reviewed similar past literature and proposed that overall job satisfaction could be predicted by the following variables: job characteristics, career salience, work family conflict and overall life satisfaction.

His respondents, trainers of a Public Training Institute, had an average age of 40 years old and have been serving for an average of 16.23 years. His findings are plausible since the variables job characteristics, career salience, work family conflict and overall life satisfaction were relevant for employees that almost reaching their prime age. This is in contrast to the objective of this study where the dispositions of fresh graduates were investigated to explain the variation in job satisfaction. Job satisfaction will be inferred from statements and behaviours (Dunham & Smith, 1979). The instrument used for this study is based on the modification of work by Phelan and Phelan (1983), and Dunham & Smith (1979).

## 2.2 INDEPENDENT VARIABLES

### Between College Effects

#### College Selectivity & Overseas versus Local Institutions:

In Western societies many researchers suggest that the kinds of colleges and universities students attend and their experiences in those institutions are very much linked to social mobility (Jenks & Reisman, 1968; Feldman & Newcomb, 1969; Mortimer, Lorence & Kumka, 1986 cited by Smart, 1988). Mueller (1988) cited many researchers (Solmon, 1973, 1975; Taubman & Wales, 1973; Sewell & Hauser, 1975; Wachtel, 1975; McClelland, 1977; Trusheim & Crouse, 1981) who concluded that the effect of selectivity of college prestige on income is statistically significant; however, disagreement exists on the importance of college prestige and certain variables like family background, high school rank, and academic ability on income. Karabel and McClelland (1987) reported that where one goes to college is consequential, especially for the occupational status of individuals from professional families and the earnings of individuals in both managerial and professional positions. Smart (1988) confirms the importance of institutions of higher learning to the income levels of graduates even when controlling for a wide range of precollege and post-baccalaureate experiences commonly used in other studies.

For this particular research, it is only appropriate to look into the past research to see if graduates of developing countries enjoyed dif-

ferent outcomes if they were trained locally versus training in foreign institutions especially in the developed western institutions.

Past research indicates that graduates from developing countries who attend foreign institutions, especially western institutions, earn a substantial higher income than those who attended the local institutions. In India (Blaug, Layard and Woodhall, 1969), reported engineers with foreign training receive consistently higher salaries than those with Indian training. Blaug (1970) found a 15% premium for foreign degrees in Thailand, even after standardizing for occupation. Pang and Clark (1970) found a higher social rate of return for foreign degrees in Singapore when compared with domestic degrees. Psacharopolous' Moroccan study (1976) contains an explicit statement of the superior quality of foreign qualifications. Demetriades and Psacharopolous (1979) reported higher rates of return for foreign degrees compared to domestic (Greek) degrees in Cyprus. Kiong (1982) reported the empirical evidence of higher premiums for foreign degrees in Malaysia and at the same time shows that this higher rate of return can be attributed principally to the graduates' superior productivity rather than the irrational behaviour of employers.

Students tend to go through changes regarding their original intentions for higher education and job expectations. Due to different environments in foreign countries, Malaysian students who came home are likely to change their expectations which may have an impact on job satisfaction. Kallur (1990) who made the comparison between Indian-trained and US-educated personnel in some academic institutions in



India reported that there was little dissatisfaction on the job for the US-educated graduates. However, the two groups statistically differ significantly in some facets of job performance.

## **Within College Effects**

### College Grades

The relationship between academic performance and life achievement has received a lot of attention among researchers. Much of the research focusses on estimating the impact of college grades on income or earnings. (Adkins, 1975; Samson et al 1984; Solmon, 1981; cited by Pascarella & Smart 1990). Baird (1985) provides an excellent explanation for why college grades might be expected to have a positive impact on individual job success and/or income. According to Baird, the classes and the curriculum are designed to equip students with skills to function as citizens of general society and to enter specific occupations and professions. Students who do well in the classroom are likely to do as well in social roles and occupational duties.

At the same time it is possible that the screening hypothesis makes employers see college grades as evidence of a prospective employee's intelligence, diligence, effort and willingness to meet institutional demands. If other things are equal, the employers will consider grades in the belief that they are important for productivity and hence graduates with excellent academic grades will be employed at the high-

est position possible that will result in relatively better income (Pascarella & Smart, 1990).

One limitation of past research is that they did not take into consideration other factors like differences in academic majors, selectivity of schools or types of occupations. Recent evidence suggest that academic achievement may have greater impact on job success in professional (versus nonprofessional) occupations and in private (versus public) organizations (Smart, 1988; Tinto, 1984). One conclusion in a recent study by Pascarella and Smart (1990) on the effect of grades on early career income stated that after taking into consideration factors like socio-economic origins, educational and occupational aspirations, secondary school academic record, college selectivity, race, undergraduate grades appear to have a modest but significant positive effect on early career income.

In Malaysian context, if there is to be an effect of grades on the level of income, it is very much conditional on other factors like gender, major of study, occupations in public or private sector and college selectivity itself (foreign or local). This is due to the fact that the society is male dominated and the country's economic activity which is dominated by the private sector is fast industrialising and hence the preferences for certain major of studies. Furthermore the western trained graduates either due extra productivity or their snobbish appeal garnered higher premium in income as reported by the previous researchers (see page 8 )

## Undergraduate Major Field of Study

There is some evidence of an apparent minimal relationship between the kind of institution attended and subsequent career attainments (Smart, 1988). Kerckhoff et al. (1982) suggested that the conventional use of only one or two measures cannot begin to capture the overall complexity of the educational process and may well have contributed more than it should have to the direct effect of socio-economic background on subsequent career attainment.

The theory of segmented labour market supports the idea that all jobs are not in a single labour market. Tinto (1980) suggested that formal education has different degrees and manners in which it influences career attainment in different occupations. Different aspects of educational experiences, besides college grades (e.g., college preparation, extracurricular activities and the undergraduates majors) satisfy the need for determining the effect of schooling on job attainment.

Other researchers studied the job attainment of different occupations such as engineers (Perruci, 1969), lawyers (Smigel, 1964), scientists (Zuckerman, 1977), and university professors (Crane, 1969; Hargens 1969, cited by Smart 1986). According to these studies, the types of occupations in the early stages of graduates' careers are very much influenced by the majors undergraduates studied. Following suit, this study investigated the majors and grouped them according to the techniques used by Biglan's (1973) typology of academic fields. The majors were divided into four dichotomous variables: hard pure, hard applied, soft



pure, and soft applied (see page 81 for examples of academic majors in each category). Smart (1988) reported graduates majoring in "hard" and "applied" fields of study (e.g., engineering and computer science) have significant direct and indirect impact on their income level especially those who were working in the private sectors. Pascarella and Smart (1990) reported similar finding that when attending a selective institution and majoring in a hard-applied undergraduate field of study each graduate had a significant, positive direct effect on early career income.

In line with the past research, and since the country is fast industrialising, the author feels strongly that the graduates from hard-applied majors, would be highly sought after and accorded a higher premium in income.

However, one must not forget that the graduate's major appears most important in preparing his or her first job after graduation rather than for subsequent jobs (Bisconti, 1987; Ochsner & Solmon, 1979. cited by Pascarella E.T. and Terenzini, P.T. 1991). Further study need to be carried out in later years of employment to see whether specific skills related to his or her major of study decline in importance in terms of job performance. Conversely, factors in importance such as intellectual skill and the ability to learn on the job which one has irrespective of one's major may increase in terms of importance for job productivity.



## College Preparation and Co-curricular Activities

College education, besides providing the educational credentials necessary for access to upper white collar professional and managerial occupations, also provides experiences and resource for students to develop more generalised orientations toward work and leisure activities. Usually all post freshmen have some affiliation with an academic department, since through this department the degree requirements are formulated and certification of successful completion is made (Weidman, 1984).

Weidman argues that the socialising impact of the department is determined by the expressed goals of the faculty for undergraduate education, which in turn determines faculty behaviour and expectations for students. Three areas of faculty emphasis or goals for undergraduate education are identified: providing a broad liberal education, providing occupational training, and mixed goals when both are emphasized.

In this study respondents are requested to provide an assessment of their satisfaction with the interaction with the department in particular and with the university in general. Assessment varies from satisfaction with quality of instruction, academic advising, career guidance and counselling, and job placement. Interaction is always a two way process, therefore respondents were requested to give their assessment of their own effort in making use of the university's facilities, especially their own effort to master the academic subjects which are likely to affect their performance in their later occupation.

It must be remembered that the department is part of a larger organization; the college or university. Students are members of the entire organization, not just the department. Any extra activities performed by the students in the university system are believed to enhance the prospect of better career attainment. Successful completion of these activities will train graduates to be skilfull in social interaction, time management, and other skills sought after by employers.

Cassel (1988) in studying career development outcomes of college student involvement in out-of-class activities reported that "participation in specific undergraduates activities indicated strong, yet curious, relationships with career satisfaction, career stability and occupational mobility. Former students who met with career counsellors, referred to career-related written materials, used computer assistance programs, and attended related seminars were less satisfied with their current employment, less stable, and more mobile. Conversely, those who were members of professional and social organizations, employed in internships, engaged in intramural sports, and enrolled in cooperative Education and ROTC programmes experienced opposite results" (p(i), abstract).

The latest work on expectation of Malaysian employers to graduates was conducted by Rashid, M.Z.A. and Sidin S.M (1996). They reported that the prospective employers had very high expectations of graduates in areas such as dedication and commitment but had least expectations in aspect such as extra-curricular activities and physical appearance.

Thus, it can be concluded that the findings of past researchers were disjointed with different results for different set of students and environment. It is envisaged that the findings of this research either will add one more examples of the effect of the curricular activities to employment outcomes or it may not have any effect at all.

### **Conditional Effects of College**

As suggested by Pascarella & Terenzini (1991) various influential collegiate experiences may have different effect on different kinds of students (for example, men versus women, minority versus non minority , low versus high aptitude students).

"While a general effect suggest that a particular experience is the same for all students experiencing it, a conditional effect suggests that the magnitude of the effect is conditioned by or varies according to the specific characteristics of the individuals being considered " Pascarella & Terenzini (1991: p.9).

### **Socio-economic Background**

Colleges and universities are the bridge for upward social mobility of almost all societies including Malaysia. Colleges and universities are entrusted with the responsibility for both education and also as screening tools for hiring purposes. Past researchers provided evidence of schooling becoming the central variable in determining social mobility. Most of the evidence is based on the occupational attainment model



developed by Blau and Duncan (1967) and the Wisconsin social-psychological model of status attainment (Smart & Pascarella 1986).

Blau and Duncan (1967) gave details of the process of occupational mobility by tracing the interdependence among four determinants of occupational achievement, two of which refer to social background (i.e., fathers' education and fathers' occupation), and two of which refer to education and first job. Although their findings indicated that social origin, education, and career beginning account for less than half of the variance in occupational achievement, Blau and Duncan indicated that father's occupational status, also has a strong influence on his son's first job and early employment outcomes. However, Jenks and his colleagues (Jenks et al., 1979) extensive multisamples analyses indicate no consistent differences in the effects of education on earnings by level of socioeconomic origin (cited by Pascarella, E.T and Terenzini, P.T. 1991).

Another aspect of social background is the issue of race which is crucial in a multiracial environments. Race was not dealt with directly in this study due to the homogeneity of the sample. In the United States, Blau and Duncan (1967) states that, the uneducated black is the subject of the prejudiced stereotype that serves to justify discrimination. Even the better educated black who may escape or be exempt from stereotypes, seems to be the one who suffers most from discrimination. Education does not produce the same career advantage for blacks as for whites. Jenkin (1988) reported similar findings in the United Kingdom " ... education apparently does not guarantee - or even offer -



social and/or occupational mobility for black youth. It cannot even guarantee work in the present climate. While West Indian children may suffer more severe educational disadvantage, the situation of the majority of their Asian peers is perhaps most poignant and most paradigmatic of the broad problem. Despite, in all important senses, doing as well as white youngsters, Asian youths still find themselves unable to compete successfully in the labour market. Suitable they may be; acceptable they are not. Not yet." (p. 13).

From the past literature it is concluded that socioeconomic status of the parents may not have significant effect on graduates' employment outcomes especially their earning. Apart from mixed results from past studies, this research was done in the situation where the government had facilitated the respondents from the disadvantage socioeconomic status to achieve the highest educational level by awarding scholarships and providing a highly subsidised educational facilities.

As one of the independent variables, the impact of socio-economic background is based on three items measurements; father's educational level, mother's educational level and family income.

### Gender

Career opportunities and compensation have historically been poorer for women than for men and this is true in all countries no matter what their economic structure and the level of employment (Eliou, 1987). Inequality has been found in salary (Knight, Sedlaceck & Backhuber

1983; US Bureau of the Census, 1984), access to occupations (Halaby, 1979; Sell & Johnson, 1979) and advancement in occupations (Harmon, 1981). Women may be eliminating themselves from higher paying jobs because they do not aspire to them according to Gottfredson (1978). A review of US Labour Department statistics suggests that women's career participation is more clustered into the traditional female occupations rather than balanced across the male dominated profession (Scott & Hatalla, 1990). A study by Cox and Nkomo (1991) on early career experience of MBA holders in the United States, found women to have lower job involvement, and face more career frustration manifested in lower levels of organizational rewards such as promotion rates and pay than white males.

According to Eliou (1987) one can almost single out certain characteristics of female workers. They have lower levels of qualifications when compared with men, lower level of pay, slower promotion rates and lower promotion ceilings, greater vulnerability at times of economic crisis, discriminatory attitudes at the work place, and unequal allocation to sectors.

One could trace the poorer career prospects of women to their educational career, which typically has the following characteristics: a more restricted participation than that of boys, often broken attendance, an unbalanced distribution among different types of education, and an education which does not have a high market value in active life. However, the origin of these characteristics is "outside" of the school system. They vary from the stereotypic image of future career pros

pects for women, the concept of unsuitability for women in masculine type of jobs, lack of ambition of both parents for girls' career activities, and the expected dual roles as a homemaker even if the women are working (Eliou, 1987).

In Malaysia, the Constitution guarantees the equality of men and women. Various legislation has been enacted to preserve, reinforce, and protect the rights of women. Women benefit from equal access to educational opportunities at all levels. Nevertheless, gender differentiation is apparent by the preference of female student for non-technical and non vocational disciplines (See Table 2.00).

As of 1990 enrolment of women in the university level in Malaysia reached a high of 44% and they are making increasing inroads into areas like medicine, dentistry, engineering, architecture and accounting. However, there continues to be a preponderance of female students in the arts and applied art courses (Sixth Malaysia Plan, 1991 - 1995).



Table 2.00 Percentage Enrolment of Female Students  
According to Level and Stream of Education 1970-90

|                                | 1970 | 1980 | 1990 |
|--------------------------------|------|------|------|
| <u>Level of education</u>      |      |      |      |
| Primary                        | 47   | 49   | 49   |
| Secondary                      | 41   | 48   | 50   |
| Post Secondary                 | 43   | 46   | 60   |
| University                     | 29   | 36   | 44   |
| <u>College</u>                 |      |      |      |
| Polytechnics                   | 13   | 22   | 25   |
| Teaching Training Institutions | 42   | 48   | 56   |
| MARA Institute of Technology   | 32   | 43   | 46   |
| Tunku Abdul Rahman College     | 24   | 34   | 37   |
| <u>Stream</u>                  |      |      |      |
| Arts                           | 47   | 61   | 65   |
| Science                        | 25   | 36   | 45   |
| Vocational                     | 24   | 30   | 22   |
| Technical                      | 4    | 27   | 36   |

Sixth Malaysia Plan 1991 - 1995 page 421 (rounded to the nearest number)

The same plan identified the following inhibitions in involving women in economic activities (Sixth Malaysia Plan, 1991 - 1995, p.423).

- i) "...the dual and often, competing responsibilities of family and career restrict the mobility and increased participation of women in the labour market;
- ii) Gender differentiation in schools not only transforms into occupational differentiation later, it also limits the adaptability and participation of women in the labour market;



- iii) Social mores and prejudices regarding the role and status of women in society and in the labour market restrain their involvement in economic activities;
- iv) \*Women with children, who are financially dependent on their husbands, are particularly vulnerable in cases of domestic violence. The lack of skills very often limits their options, preventing them from securing alternative sources of income;
- v) Women are often perceived as secondary earners who only supplement family income rather than as co-earners whose economic activities are crucial to the family. Consequently, income-generating programmes targeted at women generally reinforce their homemaker roles, providing few opportunities for acquisition of new and more marketable skills;
- vi) the lack of appropriate management training and the consequent absence of professionalism, inadequate access to credit and a paucity of relevant market information also hinder the participation of women in the economy.

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\*Note: In the author's opinion, this inhibition could also be regarded as incentives, since lately more women in Malaysia acquiring education and skill and are employed which resulted in financial independence. (See Table 2.00)

- vii) work is not generally conducive to wives and mothers, limiting the training opportunities available and hampering career development. The separation of home from the work place and the fixed hours of work constitute additional drawbacks which preclude prolonged female participation in the labour market".

The inhibitions describe the female labour force and in most cases are applicable for women graduates. Consequently it is expected that gender will have an impact on the level of income.

The above gender discrimination is still persisting until today when the Women's Wing of ruling party (WANITA UMNO) of Malaysia was still discussing issues faced by the women like poverty, discrimination, injustices and other social problems. (New Straight Times, Oct 14, 1996).

As far as job satisfaction, it is yet to be established whether gender has any impact on job satisfaction. In spite of poorer career prospects, past studies indicate that the low expectations of women make them happy with their low and poorly paid positions (Cox and Nkomo, 1991). Job satisfaction in some cases is very much related to "how flexible" are the working hours and job condition in order to suit their competing family responsibilities. Women are satisfied working in a relatively low and poorly paid position but with favourable working conditions if their income is perceived as supplementary to the family income.

## Self Perceived Esteem

One of the most significant personality dimensions that may be regarded as one's current motivation is self esteem. High self esteem individuals (high SEs) differ from their low self esteem counterparts (low SEs) in the way that they think, feel and perhaps most importantly behave. There are many definitions of self esteem, but most definitions agree on the liking or disliking of oneself. In essence self esteem is how favourable one's self evaluation of one's characteristics are. Some people have the generalized tendency to evaluate themselves (that is their identities, behaviours, cognitive skills) positively whereas others do not (Rosenberg 1979). Self esteem varies across situations and times; that is, people have both global and situational specific self esteem. For example, professional wrest-lers probably have more favourable opinions of themselves when engaged in athletic activities than in intellectual discussions, whereas with universities professors just the opposite is likely to be true.

## Global and Specific Self Esteem

On both logical and empirical grounds, global and situational specific self esteem are related to one another. Global self esteem being "whole" must be connected somehow to its component "parts" of specific self esteem. Furthermore many empirical studies show significant association between measures of global and specific self esteem (Rosenberg 1979). However, the relationship between global and specific self esteem is quite complex.



Many researchers have investigated self esteem to predict the work behaviour. Brockner (1988) cited many examples by previous researchers that workers' self esteem is one of the determinants (or at least predictors) of differences in work behaviours. Relative to low SEs, high SEs are more apt to work harder in response to significant negative feedback (Brockner & Elkind, 1985); less likely to imitate the managerial styles of their supervisors (Weiss, 1977, 1978); less negatively affected by chronic stressors, such as role ambiguity and conflict (Mossholder, Bedeian & Armenakis, 1981); and more likely to be productive in quality circles (Brockner & Hess, 1986).

However, in spite of these differences between high and low SEs in their work behaviours and attitudes, the role of self esteem in particular and personality in general has been viewed with much skepticism among organizational scholars and practitioners. Mitchell (1979) has underrated the importance of personality organizational settings compared to situational factors, such as the nature of the task, and the formal and informal organizational considerations. Many empirical studies have revealed that personality variables either were weakly or not at all related to the outcome measures of interest (Guion & Gottier 1965, Mischel 1968). Wylie (1979) and Tharenou (1979) in separate reviews of literature of self esteem concluded that except for a few studies, nonsignificant or weak results often emerged even when theory and conventional wisdom predicted strong trends.

In a review article, Weiss and Adler (1984) gave reasons for frequent low or (non-existent) statistical association between personality and



behaviour. Among them are invalid measures of the personality dimension and/or the criterion variables and inadequate sample sizes. However, they suggested that the disappointing results of previous studies are reflective of a conceptual rather than methodological failing.

To overcome theoretical inadequacy, Brockner and Elkind (1985) proposed various strategies for studying self esteem within work organizations: using self esteem within the context of existing theory, (eg., the expectancy theory of motivation by Vroom [1964] and to view self esteem as a way to evaluate the relative accuracy of competing theory (eg. self esteem acts as a moderator of the effect of positive inequity [Adam 1965] on work motivation). Although the strategies differ somewhat from one another, they all imply that it may be more beneficial to consider the conditions under which attitudes are observed, rather than to explore self esteem as a main effect predictor of employee actions and feeling. In this study self esteem and occupational choice, self esteem and the search for jobs and self esteem and job satisfaction will be studied.

### Self Esteem and Occupational Choice

It would be interesting to discover the pattern or types of employment of the sponsored graduates, given the fact that they were almost free to choose to work either in public or private organisation or to be self employed. Choosing a job is a personal decision and usually graduates will choose a job that is congruent with their needs and wants, whether they be intrinsic (e.g., high pay) to the job itself; and their ability

to perform the activities associated with the particular vocation. But the factors will be moderate by several other factors because many individuals have chosen careers for which they probably not well suited.

Market factors (availability of a particular job) definitely play a role in forcing individuals to sometimes choose a vocation that is congruent with their needs and abilities.

Past empirical research indicates that an individual's self esteem may determine the extent to which internal versus external factors influence such decisions. Korman (1966) studied a group of undergraduate business students who were interested in accounting or sale careers. All participants completed measures of self esteem and "interaction orientation" (extent to which individual desire jobs that require social interaction).

Table 2.01 Students' Interaction Orientation as a Function of Their Self Esteem and Occupational Choice

| Self Esteem | Occupational Choice |       |
|-------------|---------------------|-------|
|             | Accounting          | Sales |
| High        | 19.9                | 24.7  |
| Low         | 21.8                | 22.7  |

Source: Korman (1968) p. 482

Note: Higher scores reflect a stronger interaction orientation.

Table 2.01 indicates those who were interested in sales rated themselves higher in interaction orientation. This was especially true for the high rather than the low self esteem participants. In multiethnic Malaysia, sales job have been avoided by the Bumiputera in general and by Bumiputera graduates in particular (Salim, K. & Yong, M.L. 1989). It would be of great interest to the policy makers to identify characteristics that can be moulded among the Bumiputera graduates so that more of them would be involved in sales job to eliminate identification of race according to the types of employment.

Brockner (1988) reported the following:

- (a) High SEs believe that their chosen career is likely to satisfy their desires to a greater extent than do low SEs.
- (b) High SEs believe that they possess more of the abilities that are important for them in order to succeed.

Most studies that incorporated self esteem as independent variables are correlational in nature. There are many ways to explain the causal significant association between variables. Brockner (1988) suggested two possibilities of self esteem that influence the extent to which individuals rated themselves as more or less well suited for their chosen vocation:

- i) Self esteem may have affected their actual choice of vocation.



- ii) Self esteem may have influenced the extent to which they perceived themselves as well suited for their chosen vocation.

The two possibilities have different practical implications. If the first one is more accurate, then vocational counseling is necessary for low SEs in order to increase the likelihood that they will choose careers congruent with their needs and abilities. If the second possibility is more accurate, then vocational counseling for low SEs would be relatively ineffective. Low SEs would find themselves less well suited for whatever career choice they had made.

Shamir (1986) who studied highly educated unemployed workers (previously employed) found that low SEs were more willing to consider job offers that compromise their needs about two important features of the job: level of pay and professional content. In essence low SEs were more willing than high SEs to choose jobs that did not suit them. Although this study lent support to the first hypothesis, further research is required to relate self esteem to first time career choice.

Korman (1970) suggested that individuals act and think in ways that reinforce or are consistent with their existing level of self esteem. Presumably, the greater tendency of high SEs than low SEs to choose careers for which they are well suited enables both groups to maintain their prior level of self esteem. However, from correlational relationship it may be misleading to hypothesize that self esteem causally affects occupational choice. Furthermore, there are other explanations for the



positive relationship between self esteem and perceived suitability of career choice. One possibility is that a third variable may be predominant over self esteem and suitability of vocational choice. For instance it is possible that other personality variables, such as intelligence, influence the correlation between self esteem and perceived career suitability.

### Self Esteem and Job Search

Once individuals decide upon their particular vocation, it is important to learn how individuals actually search for jobs and how they fared at their job interviews. It would be relevant to see if self esteem relates to process and/or outcomes of their job search. Studies by Shamir (1986) and Ellis and Taylor (1983) found out that low SEs tend to resort to formal sources like employment agencies and newspaper advertisement for information and job search, whereas the high SEs individuals had found their jobs through more individualistic methods such as using personal contacts or direct applications to prospective employers. The studies also found low SEs to be more reliant than high SEs on formal sources of gaining employment. Rosenfeld (1975) indicated such sources are less likely than the informal ones to lead individuals to job attainment. Finally Kaufer and Hulin (1985) indicated that high SEs make favourable impressions in their job interview and actually receive job offers.

## Self Esteem and Job Satisfaction

The research on occupational choice and job searching suggests that an individual's self esteem is a significant predictor of his or her behaviours in the process of gaining entry into work organizations. Just as important, self esteem might relate to employees' work behaviours and attitudes on the job. Past research indicated that self esteem correlates with job satisfaction. Tharenou (1979) demonstrated that high SEs are more satisfied with their jobs than low SEs.

All of the above findings indicated that one's inner characteristic or in this case self-esteem resulted in different behaviour as far as selecting for employment and the consequent outcomes of employment. Again, the criticism against past findings that is going to be inherited in this research is the manner in which self-esteem was measured. Here graduates perceptions were recorded rather than using objective observational techniques. Furthermore in all of past findings quoted, the issue of how those perceptions recorded were not investigated from different cultures point of view. The question one would like to ask would be, will an introvert person express his/her inner characteristics as openly as another extrovert person?

In line with past research (Pascarella, E.T. and Terenzini, P.T., 1991) the author believes that we can look at Self-esteem as the resultant of college education. We may want to study how much the effect of college attendance positively related to not only students' academic but social concept, as well as self-esteem. We may want to know the

net college effects on the general regard in which they hold themselves and their abilities, the extent to which they consider themselves to be capable, significant, worthy or of value, and in summary their self-esteem. However it is to be noted that the exploration of the net effect of college education to one's Self-esteem is beyond the scope of this research.

### English Proficiency

Besides the usual variables, the present study sought to determine the impact of English proficiency on academic performance and career attainment. About half of the population of the study (i.e., those who were trained overseas and the graduates of Islamic International University) would have undergone their training using English as the medium of instruction.

One of the legacies of British colonization resulted in English becoming the most important second language in the country besides the national language, Bahasa Malaysia. English is widely used in the local academic institutions (a majority of the texts and references are in English) and English is also the language of the business and the legal system in the country.

The government is concerned about the decline in the level of English as a result of two decades of promoting Bahasa Malaysia as the national language. The Prime Minister of Malaysia described English as a "tool" to develop the nation (Far Eastern Economic Review,



Dec. 12, 1991). The declining standard of spoken English may hinder the leading role the country can play in the region as a service center of the regional economy.

Many researchers have consistently cited inadequate language proficiency as one of the most important factors affecting international students' academic performance (Xu, 1991). Problems with English adversely affect academic adjustment and performance, social interaction, and general adjustment (Spalding & Flack, 1976; Reinick, 1986; Chapman, Wan & Xu 1988 cited by Xu, 1991). However there are conflicting reports about using English proficiency as predictor of academic performance especially when the tool used is Test of English as a Foreign Language (TOEFL) (Xu, 1991). In her thesis titled "Predicting Academic Success of Malaysian Students in California State University" Sprotte (1988) reported different predictors beside TOEFL to predict academic performance. Xu (1991) in seeking an alternative model to study the impact of English on academic performance of international students concluded that self perceived English proficiency was an overwhelming predictor among other variables selected of the level of academic difficulty faced by the international students.

The present study modified the Self Perceived English Proficiency Test by Xu, to measure the respondents' perceptions of the relationship of English proficiency to their difficulty faced in their daily occupational chores. English proficiency was chosen as a variable because the skill could be considered as a cognitive and affective skill. English proficiency is a cognitive skill when it affects the academic performance

and hence possibly job performance. English proficiency is an affective skill since it is a very prominent language in business and legal systems and to a certain extent in the government's administrative sectors.

Borich (1980) developed an indirect approach to measure people's perception of their educational needs.

The formula used was:

$$\text{Cal Profn} = (\text{Im} - \text{Know}) \text{Imav}$$

where Cal Profn = Calculated proficiency needed

Im = perceived importance in each item

Know = perceived knowledge score in each item

Imav = average perceived importance in each item by all respondents.

Based on the work by Borich, the author modified further the measure used by Xu to suit Malaysian context. This is so, since it is not proper to accept the work by Xu in total when his work was carried out in USA where the medium of academic instruction and the daily communication language are both English. Although English is important, Bahasa Malaysia is the national language and in some situation proficiency in English may not lead to extra advantage or may have no influence on the job outcome. It is proposed that a comparison is made in terms of the need for particular proficiency and the importance of the usage of that proficiency. Hence this study explored the possibility that

the measures of the needs for proficiency have on the effects of employment outcomes.

### **Job Related Effects**

It will not be appropriate to measure the employment outcomes of the graduates only by looking at the graduates themselves without examining the working environment that the graduates are currently engaged.

Smart (1988) states that "... clearly the income level of college graduates is a function of a complex series of events that encompass their attributes at the time of college entry, the kinds of college and universities they attend, their experiences in those institutions, the nature of the organisations, in which they are employed, and the characteristics of their jobs ...." (pg. 57).

### **Job Fit Index - a Measure of Under-employment**

Under-employment is an important concept to be addressed when discussing employment outcomes of graduates. Under-employment, when applied in general to the labour force, is difficult to define and measure. Critics of previous works on under-employment indicate that the problem is the very richness of the concept. Sullivan (1978) stated and the term 'under-employment' is rich in conceptual content. In its broadest usage, it can refer to any negative aspects of work or the



worker, either objective or subjective. This would include low income; job insecurity; job alienation on the part of the workers as well as poor performance; low productivity; bad attitude; little initiative, etc., from the viewpoint of the employer (Sullivan, 1978, cited by Richard, 1984).

Richard (1984) classified various past works on under-employment; Rittenhouse (1968) refers to under-employment as a discrepancy between actual and potential productivity; Braverman (1974); Ginzberg (1979), Sullivan (1978) and Victorisz, Mier and Giblin (1975) refer to under-employment as a discrepancy between actual and potential productivity. Both definitions pose problems of difficulty to operationalize since they include voluntary part-time work and full-time work for very low income under the heading of under-employment. Under-employment of highly educated individuals refers to the inadequate use of skills and training (O'Toole, 1977). Using similar concepts different terms were used: 'under-utilization' (Victorisz et. al., 1975), 'mismatch' (Sullivan, 1978) or over-education (United States Commission on Civil Rights 1982). Morris (1986) quoted the International Conference of Labour Statistician (ILO) that categorizes under-employment as the following:

- (a) Visible under-employment, which involves persons involuntarily working part-time or for shorter than normal periods of work.
- (b) Invisible under-employment; which exists when a person's working time is not abnormally reduced but whose employment is inadequate in other respect such as:

- (i) when his/her job does not permit full use of his/her highest existing skill and capacity.
- (ii) when his/her earnings from employment are normally low
- (iii) When he/she is employed in an establishment or economic unit whose productivity is abnormally low.

For the purpose of this study, the job fit index was used to measure under-employment and is based on the work by Richard (1984) where respondents are requested to report whether their current occupation is commensurate with the qualifications in terms of status and pay, usefulness of the skills acquired in their academic work, and the relationship between the job and the field of study.

However, as much as the human resource planner or the graduates themselves may like to see the best fit between the skill acquired or field of study with the current occupation, especially in the early stage of employment, effort must be made to recognize the full potential of the graduates. Encouragement is needed if the graduates want to branch out to different occupations that are more prestigious, better paid, more satisfying and most important, the occupation that one would like to make a life-time career.

In long run the general skills of the graduates, the ability to learn on the job, and their spirit of entrepreneurship determine the graduates subsequent move to more prestigious and well-paying occupation rather

than their specific skill (major) which initially determined the attainment of a well-paying job.

### Private/Public Sector Employment

Previous research has shown differences in the reward and reinforcement patterns of public and private organizations (Hodson, 1984; Smart & Ethington 1987 cited by Smart 1988). Smart (1988) while using different variables to study by the effect of college on incomes, concluded different reward structures for private and public organizations for college graduates. The income level of college graduates employed in the private sector are more strongly influenced by the quality of the under-graduate institutions they attended, their majors in those institutions, and the grades they earned. These findings suggest that private firms, more than public agencies, may use under-graduate institutions as a filter for screening college graduates for initial employment and subsequent reward. On the other hand, the income levels of graduates employed in public agencies is more influenced by measures of the nature of their current jobs.

Kiong (1986) made comparisons between recruitment behaviour of the private and public sectors in Malaysia. The findings were slightly different from those of Smart where the public sector places more importance on academic record, whereas the private sector places more importance on experience and affective skills. The differences are attributed to differences in organizational behaviours. However, both see



the primary role of the university as that of developing problem-solving abilities rather than specific skills. An individual who has problem-solving abilities and affective skills rather than occupation-specific competence will be sought after by both sectors.

The latest work on expectation of employers to graduates was conducted by Rashid, M.Z.A and Sidin, S.M. (1996). They reported almost the same finding as Kiong's work in 1986. Their survey on employers found that the private sector gave higher rating for those who graduated from abroad while public sector had a better perception of local graduates. The private sector has high expectation of communication skills, initiative and proficiency in the English language, while the public sector has the high expectation of creativity, initiative and communication skills. Thus in general the expectation of employers are oriented toward skills in communication, creativity and initiative. This finding is very much in agreement with some old studies, for example the work by Bowles and Gintis (1976) that argued effective performance in most jobs depends very little on cognitive skills, but much more on certain non-cognitive skills as proposed by the above study by Rashid & Sidin.

However, both papers (by Kiong and Rashid & Sidin) that gave preferences for foreign trained graduates have their weaknesses since they failed to describe the detail educational background of the respondents among the employers.

The paper by Rashid & Sidin reported, out of 100 employers interviewed, more than 70 percent of them, have at least first degree

university qualification, without mentioning where (foreign or local) the qualifications were obtained. It is plausible to suspect the possibility of foreign trained employers may have biases toward foreign trained graduates and similarly local trained employers have the affinity toward locally trained employees. Further study is needed to identify the factor for preferences toward graduates should be strictly due to their productivity and performances.

### Duration of Employment Since Graduation

Duration of employment since graduation was used in the study, as the proxy for age, to reflect the importance of job experience to employers. Those graduates who have been working for some time will earn more compared to those who just started to work.

From the job satisfaction point of view, it is predicted that overall job satisfaction would increase with age and any dissatisfaction in certain job facets will be reduced, based upon the tendency of employees to accommodate values to existing job dimensions of the work place (Spittler, 1989). However, contrary to expectation other studies reported that job satisfaction did not necessarily increase with age (Mack, 1988; Reeves, 1990; Smith, 1990).

The popular dictum "education pays" and education makes workers more productive and hence they are paid more by the employers is only one of the many explanations of the economics of education. Apart from the central function of schools to develop cognitive skills, other explanations are believed to contribute to the variation of the

income of graduates: the "socialization" function of schools (Within College effect), the screening hypothesis, the concept of "incomplete" employment contract, the phenomenon of the internal labour market, and the notion of labour market segmentation (Blaugh, 1985). These factors which may be further investigated by surveying the employers who were not specifically looked at in this research.

Bowles & Gintis (1976) argued that effective performance in most jobs depends very little on cognitive skills, but much more on certain non-cognitive personality traits. Attaining the top occupational pyramid, accessible mostly to university graduates, requires a set of personality traits: self esteem, self reliance, versatility, and the ability to assume leadership roles (conditional effect of college). Most professionals involve themselves in indispensable element of cognitive knowledge, but most of the time they are also involved in general communication skills and problem solving abilities, which are very much associated with their personality traits. There are certain jobs, for example, open heart surgeon or an aeroplane pilot, where what matters most is cognitive judgement and psychomotor skills. In other professions such as lawyers, accountants, engineers, computer scientists and even university professors, cognitive skills play important roles. In all of these examples success is also associated with the personality traits of achievement motivation - the motivation to excel in whatever one does for its own sake - rather than with factual or conceptual knowledge (Blaugh, 1985). The 1980 World Development Report concludes that "schooling imparts specific knowledge and develops general reasoning



skills (its cognitive effects) it also changes, beliefs and values and attitudes toward work and society (non-cognitive effects). The relative importance of these effects is much debated, but poorly debated; both are extremely important (p. 47)

The screening hypothesis belief is, the notion that educational credentials act as surrogates for qualities which employers regard as important, predicting a certain level of job performance, without however, producing any direct contribution to job performance. The screening hypothesis accounts for the fact that earnings rise with additional education. Psacharapoulos & Wooddhall (1986) proposed screening hypothesis in two versions that is "initial (weak)" and "persistent (strong)" versions. In the weak version educational credential becomes the surrogate for ability and quality of the employees when initially recruited. However in the later stage of employment the current performance that matters and hence allowing for the possibility of lesser qualified employee being promoted at the expense of a better qualified employee. The strong version proposed that lack of educational credential becoming the stumbling block for promotion in spite of excellent performance in the job. However putting it differently, strong version screening hypothesis would require the employers to keep paying wages above an employees' productivity after the employees have been under their observation for some time, which in this case could be difficult to support by evidences.

In multiracial Malaysia, in the past, a variety of screening devices were often used by employers; education, race, gender and age. Now

education has become more prominent in the list of screening devices for hiring decisions. Judging an individual on the basis of the average characteristics of his or her ethnic group is obviously unfair to individuals of high ability who belong to groups that employers regard unfavourably. Such screening represents statistical discrimination by the employers. One of the objectives of the New Economic Policy introduced by the Malaysian government in 1970 (Malaysia, 1991) was to remove this statistical discrimination in order to not identify races according to types of employment.

In writing about labour problems, economists sometime use the term "commodity" for the labour, and labour is treated like any other commodity that can be bought or sold in the market place. But under capitalism, labour is not in fact like any other commodity because its hiring contract is typically "incomplete" (Blaug, 1985). Although job specifications are written in the hiring contract, one specification which is not spelled out is about the intensity and quality of effort to be expended. The whole process of deriving the maximum employee effort is done through constant monitoring and policing, backed up by the assurance of promotion or the threat of dismissal. In the final analysis more than academic credentials must be used by the employers to win trust and loyalty from the employees which is crucial to the prosperity of the organization.

Workers expect the organization to operate an internal labour market, where workers are trained in specific skills in the job and later on

promoted to a higher level and better paid jobs as vacancies appear. This situation departs from the concept of perfect competition where the most productive worker is hired from the external or internal market, it also makes screening more prominent in the hiring decision. Employers must use a dependable sorting device to recruit a person who is likely to spend a life-time career with their organization. Hence the educational credentials become a tool for them to easily pick the ambitious, versatile, more settled person that one usually associates with the graduate.

In Malaysia, the private sector is predominantly controlled by one race (i.e., the Chinese) or by foreign ownership, creating a segmented labour market where "good jobs" are not necessarily randomly assigned to Bumiputera workers in spite of their educational credentials or personality characteristics. The reverse is true for the public sector where the government's policy of affirmative action in selecting Bumiputera to fill job quotas in an effort to upgrade the well being of a less economically advanced population of the country is more dominant. Past research indicate that the segmentaion does not only occur due to different ownership, but also due to different types of occupations, professional or non-professional, and public or private (Tinto, 1984; Pascarella 1990). In each case differential treatment and expectations are due to the graduates.

The main thrust of this study is to compare the employment outcomes of graduates of foreign versus local institutions. Examples of



several issues to be addressed by this study are: Is productivity associated with foreign training that the graduates were preferred by the employers? (Kiong, 1982, Rashid M.Z.A, Sidin, S.M., 1996); Do employers have the perception that graduates who survive the foreign training have an 'extra edge' on affective skills?; Does better English proficiency of any graduate equip him or her with cognitive and affective skills to perform satisfactorily especially in the private sector where English is the predominant language?

Although the race issue is crucial, especially in the context of multi-racial Malaysia, it was not dealt with since the population for this study was only among one group (i.e., the Bumiputera). However the effect of the segmented labour market (i.e., predominantly non Bumiputera) private sector versus the predominantly Bumiputera public sector in terms of acceptability and preferences by both groups of graduates is studied in order to determine whether the scholarship policy of the government brought some success in reducing the identification of races according to the types of employments.

The role of higher education has been considered from a variety of perspectives. As mentioned previously, there is a common belief that education pays and this makes education a positive instrument for individual and social betterment. However, others suggest higher education has little direct impact and serves only as a vehicle for those already advantaged. More ominously, some argue that education is a deliberate play of social control and manipulation which in Malaysia's

case is indeed a deliberate social engineering effort to create equality among races by sponsoring the disadvantaged youth to the highest educational attainment.

Such diversified views attracted extensive research on the impact of education to life outcomes, focussing on economic and status outcomes of individuals. In the present study only two life outcome variables were chosen, i.e., income level and job satisfaction.

### 2.3 Summary

In evaluating the previous papers, one must be cautious about the effect of the economic cycle of the time the studies were based on to the findings. In Malaysian context the research was done in late 1992, where the country was experiencing an economic expansion and was facing shortage of skill personnels. (UNDP/World Bank Report 1995). At this booming economic cycle, the excessive demand for graduates forced the employers not to be choosy for the kind of graduates they are recruiting.

One of the objective of the study was to investigate the early employment outcomes of the graduates which can be used as a basis for future career development. Subsequent career mobility and progression is very much a function of interaction of graduates disposition, skill,

ambition and career planning with different working experiences. It is also very much depending on industry transformation and economic progression of a country. Malaysian economy is migrating toward high-technology, higher value-added industries. Technology is changing the face of industries and of the careers within them. "One can't be instrumental about where the hot careers are because, as we know, half of the jobs that exist today didn't exist a decade ago". (Sloan, J. 1996, cited by World Executive Digest April 1996).

Nevertheless, the knowledge about graduates' disposition, skills, their early jobs and also the employer's expectation would be very useful start to predict future career progression.

In conclusion, in accepting the notion that education pays, previous researchers indicate that many other factors are affected the outcomes of education. In various effects of between college, within college, conditional effects, and the characteristics of job themselves contributed toward the education outcomes. In comparing outcomes of foreign training and local training, previous researchers indicated that some premium in terms of income were attributed to the foreign trained graduates especially by the private sector. The literature also indicated that foreign trained graduates are not necessarily dissatisfied in their jobs and various covariates give different effects to the kind of job satisfaction.

Perhaps it is also important to note that most of the literature on the effects of college education on employment outcomes were based on respondents in the developed countries. It would be interesting to discover whether this research would reveal similar findings or new observations unique to Malaysia in particular and to developing countries in general.



## CHAPTER III

### CONCEPTUAL MODEL

#### 3.0 INTRODUCTION

This chapter discusses the conceptual model proposed based on the literature review and it also describes the variables used to explain the model.

Basically, the literature review indicated that the antecedents to education outcomes can be broadly categorised into between college effect, within college effect, conditional effect and job related effect as depicted in figure 3.00.

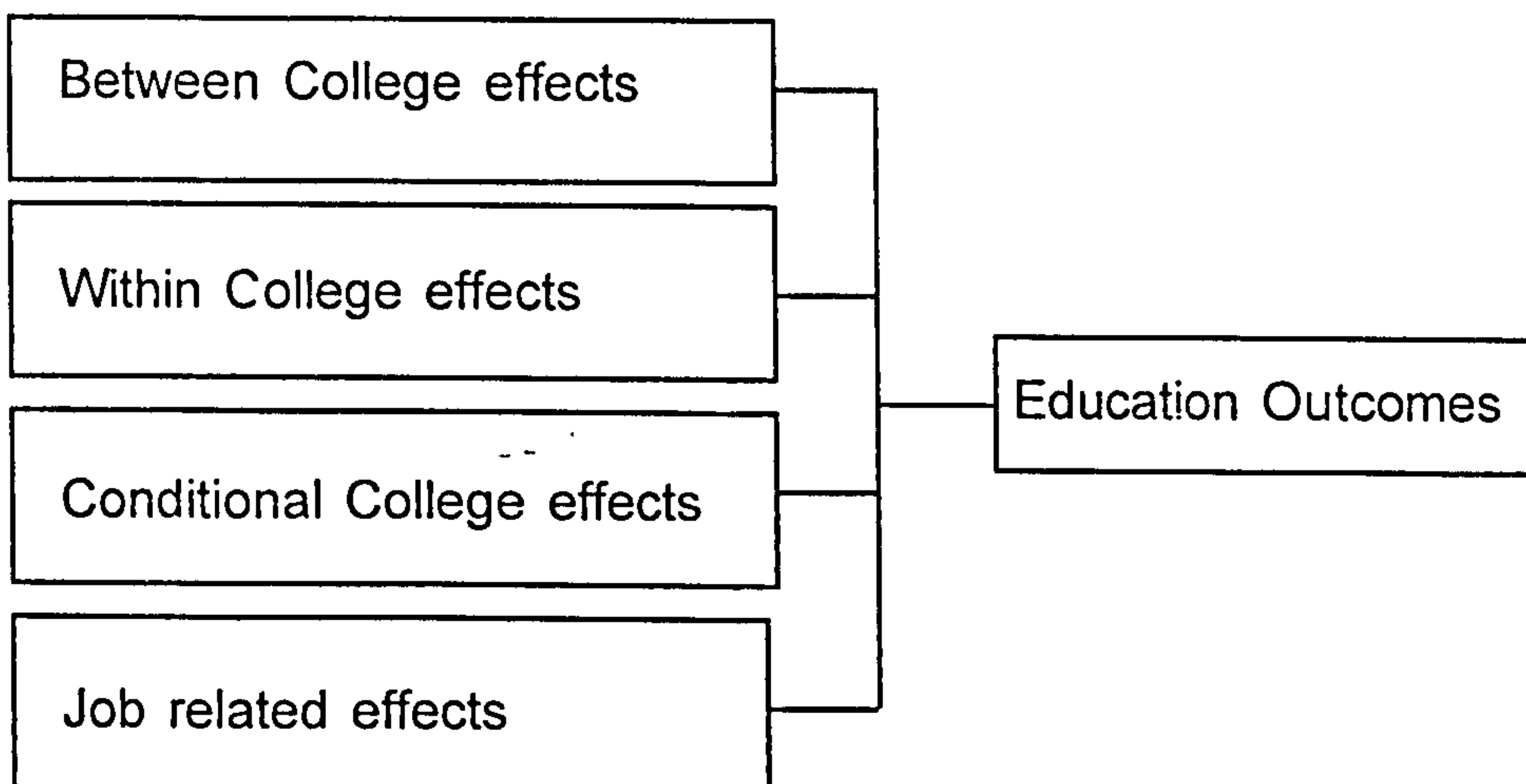


Figure 3.00 Basic Antecedents of Education Outcomes

The author, based on the above basic model and the literature review is proposing that the antecedent to income level and job satisfaction are as explained in the figure 3.01 and 3.02.

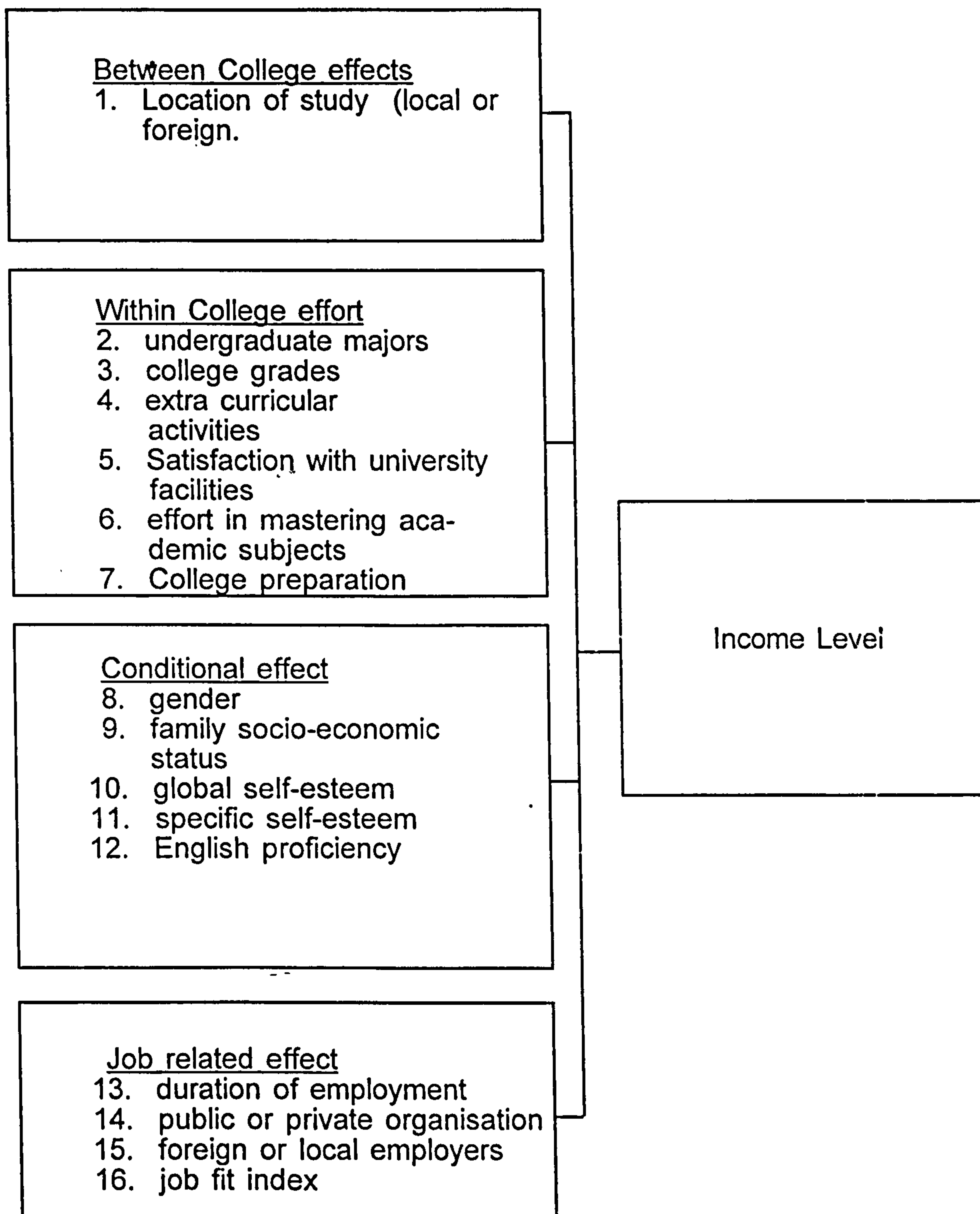


Figure 3.01 Antecedents of Graduate's Income

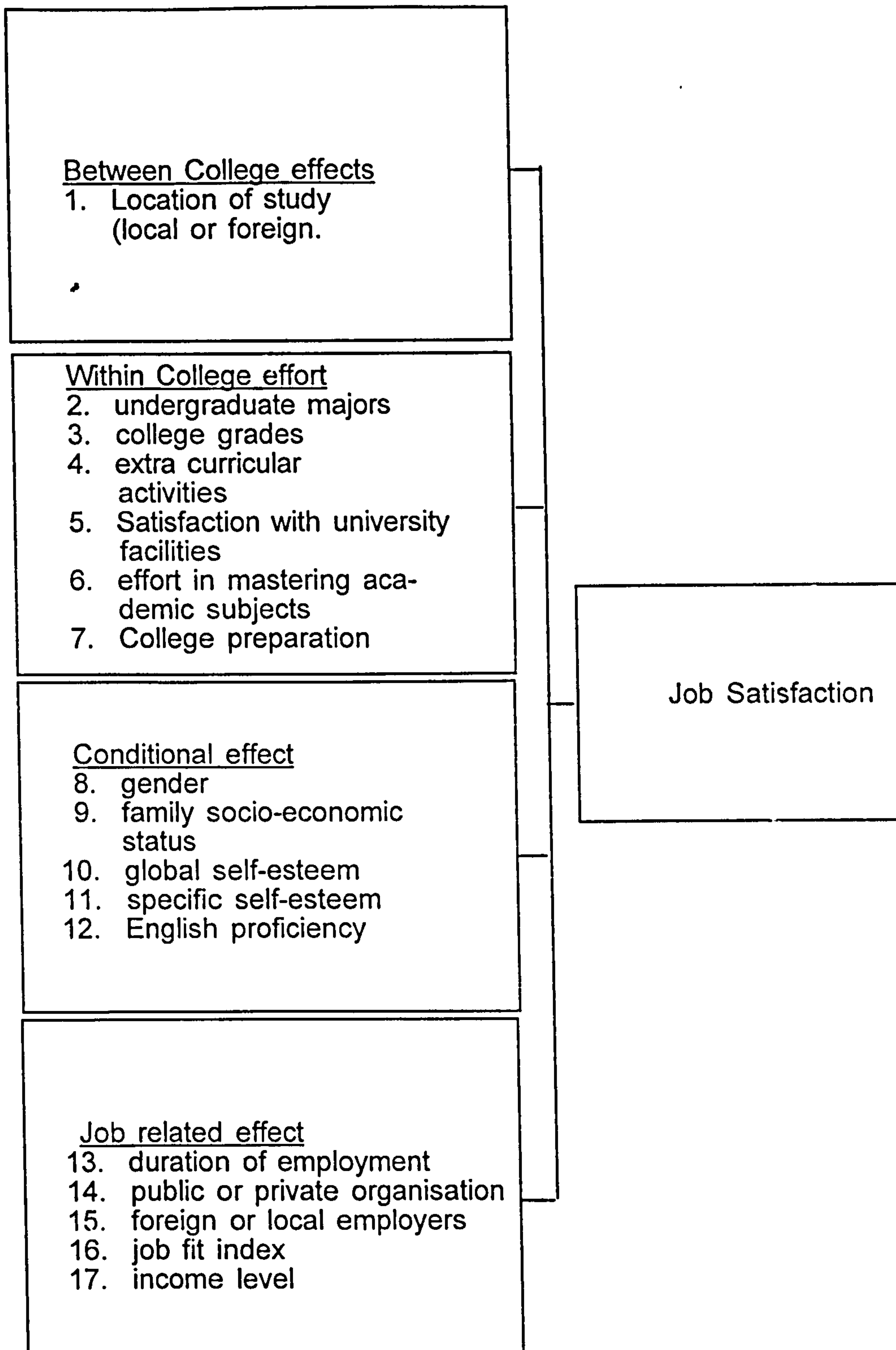


Figure 3.02 Antecedents of Graduate's Job Satisfaction

The antecedent to income level in Table 3.01 incorporated all possible variables explored in the literature review. Notice that majority of the variables described graduates disposition and their experiences while studying in colleges. The antecedents point out by the literature review will not only predict the income level of the graduates but also help us in differentiating the employment outcomes of the two cohorts of graduates.

Table 3.02 indicated the antecedents of job satisfaction which again consist of the majority of variables that explain graduates disposition and their experiences while studying in colleges. Slight modification was made in job related variables by including income level itself as the predictor of job satisfaction. Some of the variables like career salience, work family conflict and etc that could be associated with employees who have been working for a considerable time were not included as antecedents of job satisfaction.

### **3.1 VARIABLES OR FOCUS OF THE STUDY**

The literature review shows that the different variables for various effects to the income level and job satisfaction are as shown in Figure 3.01 and Figure 3.02 respectively. This section provides information of how all the variables were measured. Further details of the variables are explained in Chapter IV.



## **Between College Effects**

### 1. Location of Study

Dummy variables were used to measure the of different college in different countries graduates attended. "1" for foreign and "0" for local.

## **Within College Effects**

### 2. Undergraduate Major

Four dichotomous variables were based on the first two dimensions of the Biglan (1973) typology of academic fields (i.e., hard vs soft, pure vs applied). This yielded four major fields of study: hard-pure, hard-applied, soft-pure, and soft-applied fields (See page 81 for examples of academic majors of each category). The soft-pure category was always coded zero and thus is not nominally represented in regression results.

### 3. University Grades

One item measures based on the respondents undergraduate grade point average. Standardization is to be made to take into consideration the local, US and UK institutions grading systems.

4. Extra-curricular Activities

Membership involvement and extra skill in the following:

1. societies/club/associations. (Different scores will be given for ordinary membership or office bearers).
2. professional affiliations.
3. part-time employment during schooling
4. activities related to job search and participation in self improvement courses.

5. Satisfaction With University's Facilities

The degree of satisfaction of respondents to quality of instruction in their major, overall quality of instruction, academic advising, career guidance and counseling and the satisfaction to quality of job placement. These variables were identified as SATISUNI (Satisfaction with university facilities).

6. Effort in Mastering Academic Subjects

Self-assessment of their own effort and contribution in mastering academic subjects.

7. College Preparation

A combined measure of satisfaction with university's facilities and own effort in mastering academic subjects.

### **Conditional College Effects**

8. Gender

Dummy variables were used to measure the influence of gender on other variables: "1" for female and "0" for male.

9. Parents' Socio-economic Status

A three item measure based on the educational levels of respondents' father, mother and total family income was generated.

10. Global Self Esteem

This variable is designed to measure attitudes toward the self along a favourable dimension. For example, high self esteem means that the individual respects himself and considers himself worthy, but does not necessarily consider himself better than others and definitely does not consider himself worse. A person with high self esteem does not feel he\* is ultimately perfect; on the contrary, he recognizes his limitations and expects to grow and improve. In contrast a person with low self esteem has the opposite character-

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Note: \*he refers to he and she

ristics describing a person with high self esteem. The variables are scored so that high values indicate a high self esteem score. Ten items measures proposed by Rosenberg (1965) were used to measure self perceived esteem.

11. Specific Self Esteem (Social Confidence)

In addition a specific self-esteem instrument to measure social skill of people interaction was used. The instrument used was based on selection of appropriate items of Janis-Field Self Esteem Scales (Brockner, 1988).

12. English Proficiency

The only practical way of assessing the respondents' English proficiency is to use self-rating and in this study the modification of Self-Perceived English Proficiency instrument developed by Xu (1991) was used.

**Job Related Effects**

13. Duration of Employment

Cumulative duration of employment in months since graduation.



14. Sector of Employment - Public or Private Organisation

Dummy variables coded "1" for public and "0" for private sector employment.

15. Employers' Ownership - Local Corporation or Corporation with Foreign Participation.

Dummy variables representing ownership of the organisation respondents employed is coded "0" for local corporation and "1" for corporation with foreign participation. This variable was considered to investigate further the possibility of preferences of foreign trained graduates.

16. Job Fit Index

An additive three-item questions based on self report using measures suggested by Richard (1984) were administered only to those who are holding full-time permanent (inclusive of those who are on probation) jobs. The questions seek to find out whether the status of the job commensurate with the qualification, usefulness of the skill acquired and relationship of job and the field of study.

## **Dependent Variables**

### Income Level

Respondents' current (surveyed in October - December 1992) annual income measured in Malaysian Ringgit.

### Job Satisfaction

Job satisfaction is an additive measurement of an overall job satisfaction using a modification of multiple-items instrument proposed by Phelan and Phelan (1983) and also to include items of facets of job satisfaction from Job Descriptive Index by Smith, Kendall and Hulin (1969), i.e., satisfaction with pay, with co-workers, and with supervision.

The item to measure satisfaction of relationship between job with religious and moral values is specially included in the multi-item instrument to reflect the possibility that graduates only chose certain jobs that are compatible with their spiritual values.

## **3.2 HYPOTHESES**

Based upon the review of literature there are several interrelated factors that are found to be associated with level of income and job satisfaction of the early employment outcomes. These factors are classified into the following categories: between college effects, within college effects, conditional college effects and job related effects.

The following hypotheses were developed to test the relationships between those factors and income level and job satisfaction.

## **Hypotheses Concerning Income Level**

### Between College Effects

1. A relationship exists between location of study and level of income.

### Within College Effects

2. A relationship exists between major of study and level of income.
3. A positive relationship exists between university grades and level of income.
4. A positive relationship exists between extra-curricular activities and level of income.
5. A positive relationship exists between satisfaction with university's facilities and level of income.
6. A positive relationship exists between own effort in mastering academic subjects and level of income.
7. A positive relationship exists between college preparation and level of income.

### Conditional College Effects

8. A relationship exists between gender and level of income.
9. A positive relationship exists between socio-economic status of the parent and level of income.
10. A positive relationship exists between global self esteem and level of income.

11. A positive relationship exists between self esteem (social confidence) and level of income.
- 12.\* A positive relationship exists between proficiency of academic English and level of income.
13. A positive relationship exists between proficiency job related English and level of income.
14. A positive relationship exists between overall English proficiency and level of income.
15. A negative relationship exists between need for upgrading academic English proficiency and level of income.
16. A negative relationship exists between need for upgrading job related English proficiency and level of income.
17. A negative relationship exists between need for upgrading overall English proficiency and level of income.

#### Job Related Effects

18. A positive relationship exists between duration of employment and level of income.
19. A relationship exists between sector of employment (public/private) and level of income.
20. A relationship exists between employers' ownership (foreign or local corporation) and level of income.
21. A positive relationship exists between job fit index and level of income.

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\*Item 12 to 17, were explored by expanding the variables based on work of Xu (1991) and Borich (1980)



## Hypotheses Concerning Job Satisfaction

### Between College Effects

1. A relationship exists between location of study and job satisfaction.

### Within College Effects

2. A relationship exists between major of study and job satisfaction.
3. A positive relationship exists between university grades and job satisfaction.
4. A positive relationship exists between extra-curricular activities and job satisfaction.
5. A positive relationship exists between satisfaction with university's facilities and job satisfaction.
6. A positive relationship exists between own effort in mastering academic subjects and job satisfaction.
7. A positive relationship exists between college preparation and of job satisfaction.

### Conditional College Effects

8. A relationship exists between gender and job satisfaction.
9. A positive relationship exists between socio-economic status of the parent and job satisfaction.

10. A positive relationship exists between global self esteem and job satisfaction.
11. A positive relationship exists between self esteem (social confidence) and job satisfaction.
- 12.\* A positive relationship exists between proficiency of academic English and job satisfaction.
13. A positive relationship exists between proficiency job related English and job satisfaction.
14. A positive relationship exists between overall English proficiency and job satisfaction.
15. A negative relationship exists between need for upgrading academic English proficiency and job satisfaction.
16. A negative relationship exists between need for upgrading job related English proficiency and job satisfaction.
17. A negative relationship exists between need for upgrading overall English proficiency and job satisfaction.

#### Job Related Effects

18. A positive relationship exists between duration of employment and job satisfaction.
19. A relationship exists between sector of employment (public/private)

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\*Item 12 to 17, were explored by expanding the variables based on work of Xu (1991) and Borich (1980)

20. A relationship exists between employers' ownership (foreign or local corporation) and job satisfaction.
21. A positive relationship exists between job fit index and job satisfaction.
22. A positive relationship exists between income level and job satisfaction

## **CHAPTER IV**

### **METHODOLOGY**

#### **4.0 INTRODUCTION**

This chapter covers a discussion of the design of the study, the population and sampling methods used, the instrument used to gather the data addressing the research questions in the study, the data collection procedures and the data analysis methods used.

#### **4.1 RESEARCH DESIGN**

This research was a descriptive - correlational study, designed to identify and describe variables and the nature and strength of relationships among variables. A cross-sectional research design was employed to examine the relationship between location of study (i.e., overseas or local institutions and the early employment outcomes). Income and job satisfaction were selected to explain the status of employment outcomes and they were looked at separately as the dependent variables. According to Ary, Jacobs, and Razavieh (1985), correlational studies are designed to determine the extent to which variation in one variable is associated with variation in another variable. "Correlational research ... can help us make more intelligent predictions ... The Approach requires no manipulation or intervention on the part of the researcher other than that required to administer the instrument(s) necessary to collect data desired. In general, this type of research would be undertaken when



one wants to look for a describe relationship that may exists among naturally occuring phenomena, without trying in any way to alter these phenomena" (Fraenkel & Wallen, 1990, p.9)

Furthermore regression techniques were used to explain the relationship between two dependent variables with the location of study and a host of other independent variables that were mentioned in the literature review.

In comparing the early employment outcomes of two groups of graduates (i.e., those who were trained overseas [UK and USA institutions] versus those who were trained locally), the following variables were examined and described. The variables selected were, based on the proposed models of antecedents to graduate's income and job satisfaction as discussed in the previous chapter.

### **Independent Variables:**

#### Between College Effects

1. location of study (local or foreign)

#### Within College Effects

2. undergraduates major
3. college grades
4. extracurricular activities
5. satisfaction with university facilities

6. effort in mastering academic subjects
7. college preparation

conditional effect

8. gender
9. family socio-economic status
10. global self esteem
11. specific self esteem
12. English proficiency

Job related effect

13. duration of employment
14. public or private organisation
15. foreign or local employers
16. job fit index

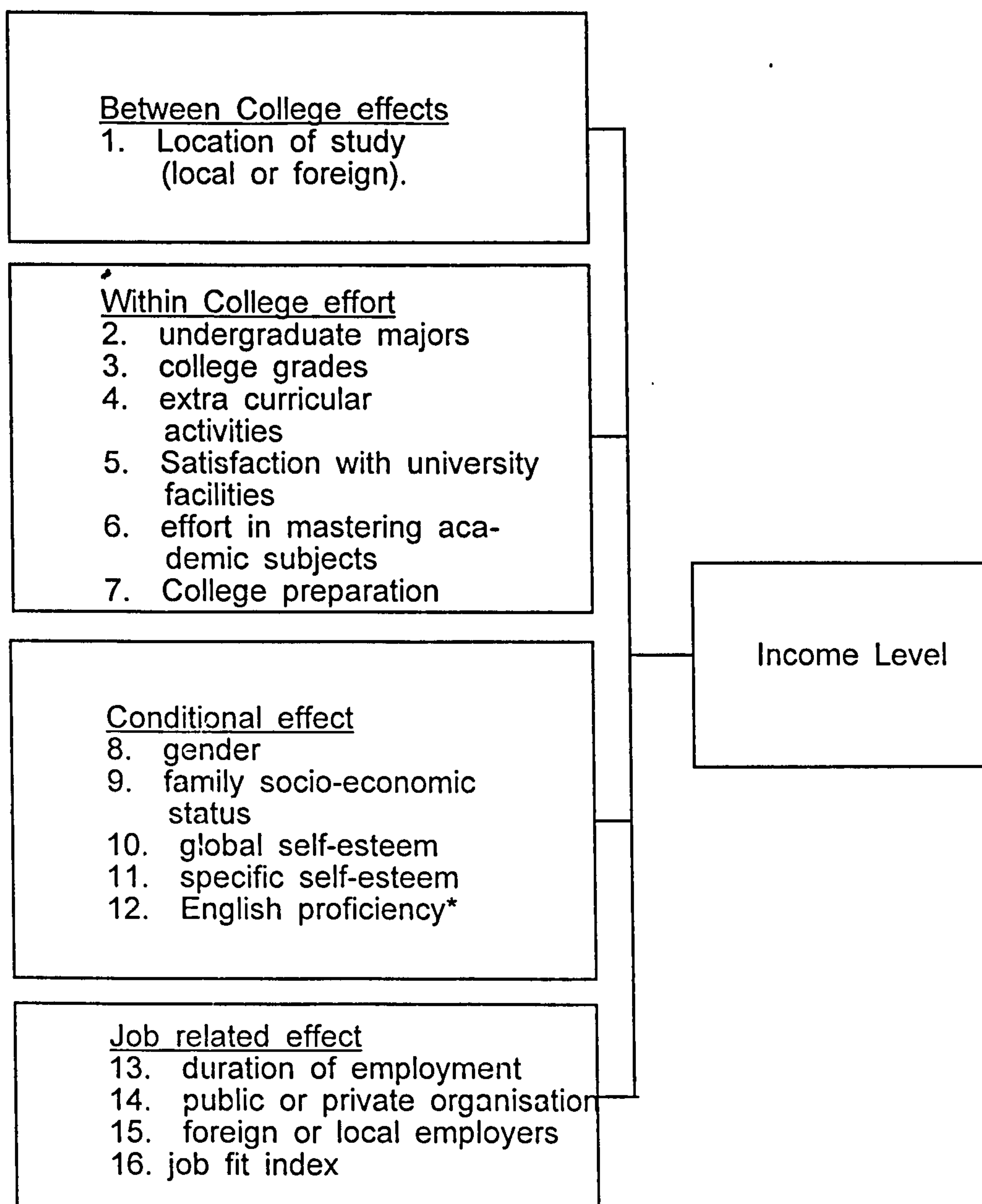
**Dependent Variables:**

1. income level
2. job satisfaction

As mentioned in the literature review the independent variables selected were based on previous research. The traditional belief that extra years of education will add up to the average income was expected to include other academic related variables like location of study (local or abroad), academic majors, college grade and English proficiency.

Other factors like gender, socio-economic background and 'job fit index' may relate to cognitive skills in certain jobs. Personality characteristics such as self esteem and extracurricular activities which may contribute to the make up of personality traits were selected. Finally job characteristics such as sector of employment (public or private), foreign or local employer and duration of employment were selected to explain the previously mentioned concept of internal labour market, segmented labour market and screening hypothesis that resulted in the variation of income of graduates.

The anticipated relationship between the independent variables and dependent variables can be seen as shown in Figure 4.00.



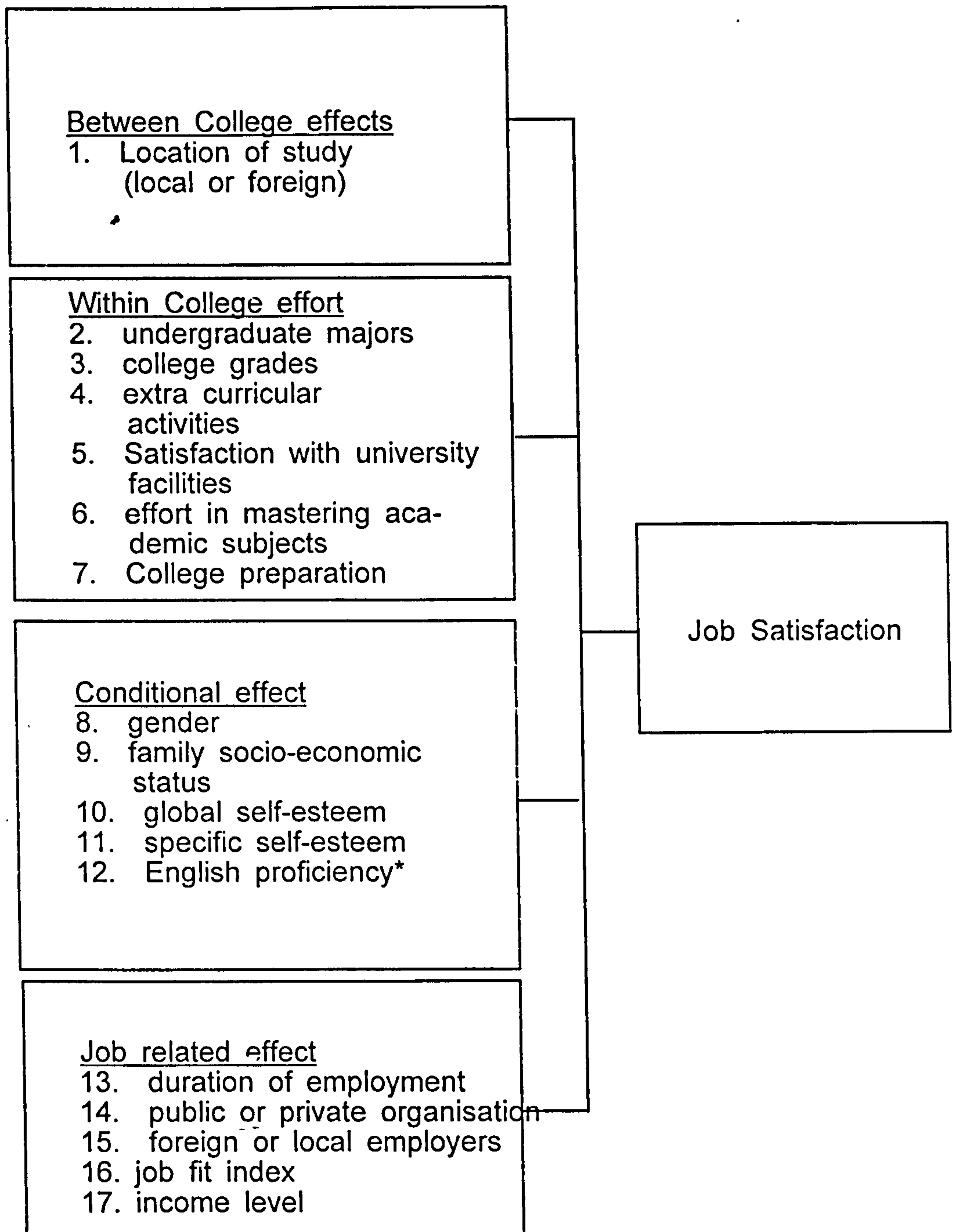
\* Different variables based on work by Xu (1991) and Borich (1980) were tested. (see hypotheses from page 75 to 76)

Figure 4.00 Antecedents of Graduate's Income



Figure 4.01 showed the independent variables that were selected to explain the possible association with the other aspect of employment outcomes - job satisfaction.

The variables are the same except for an additional job related variable, i.e., income itself which is now treated as the independent variables. It is also decided to break further the variable college preparation into its components of satisfaction with universities and effort in mastering academic subject in order to explore the possibility that each may become the predictor of the dependent variable job satisfaction.



\* Different variables based on work by Xu (1991) and Borich (1980) were tested. (see hypotheses from page 77 to 79)

Figure 4.01 Antecedents of Graduate's Job Satisfaction

## 4.2 INTERNAL VALIDITY

Measurement error is a major threat to internal validity when using survey methods. Measurement errors are related to issues of validity and reliability of data (Kerlinger, 1973). In an attempt to reduce measurement error and to establish content validity, the instrument used in the study was reviewed by a panel of experts (see Appendix A). Items in the instrument were field-tested with selected individuals to ensure that items were appropriate for the population in the study. Except for minor changes, the items in the instrument were found to be appropriate.

## 4.3 EXTERNAL VALIDITY

Three sources of possible errors can affect the external validity of research when survey methods are used. These are sampling error, frame error and non response error. Sampling error is the result of using some methods other than a probabilistic method of selecting subjects for the sample, resulting in a non-representative sample or a bias sample. When there is a discrepancy between the intended target population and the actual population from which the sample is drawn frame error is committed. Non-response error occurs when subjects selected to participate do not or refuse to participate, thereby raising the question of results being or not being representative of the entire sample (Miller, 1991).

Sampling error was addressed by strictly adhering to probabilistic sampling. Frame error was addressed by taking into account all graduates who came back from UK and US institutions and who reported to the Public Services Department of Malaysia (PSD). The names of local graduates of similar cohorts and majors were obtained directly from the universities. A random sample of non-respondents was followed up by telephone calls or personal contact to request their responses. If no significant differences existed between their responses and the majority who responded, then the responses may be deemed representative of the entire sample, i.e., the accessible population. The random sample of non-respondents who were not able to be contacted were examined from the secondary source in term of gender, location of study, major of study and college grades which were readily available. See Table 4.00. The examination and the appropriate statistical tests carried out indicated that there were no evidence to suggest the respondents and the non respondents represent particular biased groupings of the population.



Table 4.00 A Comparison of Some Characteristics of Non Respondent Vs. Respondents.

|              |                            | Non Respondents |            | Respondents        |               | Statistical Tests                                 |
|--------------|----------------------------|-----------------|------------|--------------------|---------------|---|
|              |                            | No.             | %          | No.                | %             |   |
| 1.           | <b>Location of Study</b>   |                 |            |                    |               | $\chi^2 = 0.327$<br>df = 1<br>Sig. level=0.5672   |
|              | Foreign Trained            | 25              | 62.5       | 222                | 58*           |   |
|              | Locally Trained            | 15              | 37.5       | 163                | 42            |   |
| <b>Total</b> |                            | <b>40</b>       | <b>100</b> | <b>325</b>         | <b>100</b>    |   |
| 2.           | <b>Gender</b>              |                 |            |                    |               | $\chi^2 = 0.00213$<br>df = 1<br>Sig. level=0.9632 |
|              | Male                       | 26              | 65         | 252                | 65.45**       |   |
|              | Female                     | 14              | 35         | 133                | 34.55         |   |
| <b>Total</b> |                            | <b>40</b>       | <b>100</b> | <b>385</b>         | <b>100</b>    |   |
| 3.           | <b>Major of Studies</b>    |                 |            |                    |               | $\chi^2 = 1.33$<br>df = 3<br>Sig. level=0.7216    |
|              | Soft Pure                  | 4               | 10         | 21                 | 5.5***        |   |
|              | Soft Applied               | 15              | 37.5       | 152                | 39.7          |   |
|              | Hard Pure                  | 3               | 7.5        | 28                 | 7.3           |   |
|              | Hard Applied               | 18              | 45         | 182                | 47.5          |   |
| <b>Total</b> |                            | <b>40</b>       | <b>100</b> | <b>382</b>         | <b>100</b>    |   |
| 4            | <b>Grade Point Average</b> | Mean=<br>2.72   | sd=8.77    | Mean =<br>2.78**** | sd =<br>0.911 | t = 0.37<br>df = 409<br>Sig.level=.708            |

Note: Details about characteristics of respondents are available in Subsequent Tables

\* Table 5.02 page 114

\*\* Table 5.13 page 127

\*\*\* Table 5.04 page 117

\*\*\*\* Table 5.07 page 119

#### 4.4 POPULATION

The target population for the study consisted of graduates of se-

lected majors, sponsored by the Public Services Department (PSD) of Malaysia who studied in UK and US institutions and graduates of similar majors from local Malaysian Institutions. They are of similar ethnic group, i.e., Bumiputra and have graduated in the years of 1989, 1990 and 1991. To ensure a valid comparison graduates who majored in Malay studies, Islamic studies, dentistry or medicine from the local institutions were not considered since in these areas, none or very few were sponsored to study in the UK or US institutions. The local institutions chosen were the University of Malaya (the oldest and premier university in the country), the Islamic International University (the only university which uses English and Arabic as the medium of instruction), the Universiti Teknologi Malaysia (which has the largest student population in the technical areas) and finally MARA Institute of Technology (for having the largest student population in business related areas). UK and US were selected because the two countries have the highest number of students being sponsored by PSD. See appendix C for distribution of Malaysian students abroad.

initially the frame of the population was as follows as in Table 4.01.

Table 4.01 Frame of Population

| Academic Major                                | Number of graduates |                   |       |        |
|---|---------------------|-------------------|-------|--------|
|   | Local graduates     | Foreign graduates | = UK  | + USA  |
| 1. Law  | 518                 | 57                | 57    | 0      |
| 2. Economics                                  | 524                 | 301               | 100   | 201    |
| 3. Business Management                        | 337                 | 462               | 41    | 421    |
| 4. Accounting                                 | 201                 | 323               | 193   | 130    |
| 5. Computer Science                           | 125                 | 166               | 30    | 136    |
| 6. Science                                    | 285                 | 186               | 32    | 154    |
| 7. Engineering                                | 760                 | 931               | 279   | 652    |
| 8. Built Environment<br>(Arch. Planning etc.) | 186                 | 211               | 78    | 133    |
| 9. Humanities                                 | 106                 | 128               | 19    | 109    |
| Total   | 3036                | 2765              | = 829 | + 1936 |

On examining the data, the author decided not to include law graduates due to the imbalance in the number of graduates produced locally and abroad. The frame of the population was reduced to the following as shown in Table 4.02.

Table 4.02 Frame of Population Used for Analysis

| Academic Major         | Number of Graduates |                   |            |      |
|------------------------|---------------------|-------------------|------------|------|
|                        | Local graduates     | Foreign graduates | (UK + USA) |      |
| 1. Economics           | 524                 | 301               | 100        | 201  |
| 2. Business Management | 337                 | 462               | 41         | 421  |
| 3. Accounting          | 201                 | 323               | 193        | 130  |
| 4. Computer Science    | 125                 | 166               | 30         | 136  |
| 5. Sciences            | 282                 | 186               | 32         | 154  |
| 6. Engineering         | 760                 | 931               | 279        | 652  |
| 7. Built Environment   | 186                 | 211               | 78         | 133  |
| 8. Humanities          | 106                 | 128               | 19         | 109  |
| Total                  | 2521                | 2708              | 772        | 1936 |

Stratified sampling was carried out to ensure appropriate representation of different majors. To ensure representativeness sample sizes of about 500 from each group were needed (Krejcie & Morgan, 1970). A sample size of 501 and 538 respectively from local and foreign graduates were drawn by segmentation or proportional sampling (more foreign trained graduates were selected to cater for slightly larger population size).

One of the biggest problems of this research was to ascertain the current addresses of the graduates. Assistance to locate the addresses



was obtained from the Registrars of the four local institutions and from the training division of the Public Services Department of Malaysia. This department sponsors most of the graduates especially the foreign trained graduates.

There was a strong possibility that the graduates have moved to new employment addresses. The author was fortunate enough to access the database of Employees Provident Fund of Malaysia that provides working addresses of the contributors.

In general the addresses obtained were either their home addresses or addresses of their places of employment. In spite of the effort to retrieve sources from different databases, not all the names sampled were successfully traced for their current addresses. In conclusion the sample used was an accessible probabilistic sample.

Hence the records from the local institutions indicated a total of 2521 graduates satisfying the criteria and the author identified 2708 foreign graduates from PSD that becomes the frame of population of the study. Out of this number, a random sample of 1039 graduates was selected. Each subject was assigned an identification number for use throughout the study.

#### **4.5 DEVELOPMENT OF QUESTIONNAIRE**

A questionnaire was designed by the author to gather data by mail survey for the following information:

1. Location of study: To confirm the college graduates attended, whether locally coded as 1, or overseas coded as 0 and to describe the type of colleges attended overseas.
  
2. Undergraduate major field of study: Four dichotomous variables were developed based on the first two dimensions of the Biglan (1973) typology of academic fields (i.e., hard vs pure; pure vs applied). This yielded four major fields of study: hard-applied coded as 3, hard-pure coded as 2, soft-applied coded as 1. The soft-pure category was always coded zero and thus is not nominally represented in regression results. The list of subjects in each category is as follows:

Category

Majors

- |                 |  |
|-----------------|--|
| 1. Soft-pure    | humanities subjects                                    |
| 2. Soft-applied | economics<br>business management<br>accounting/finance |

Category

Majors

- |                 |   |
|-----------------|---|
| 3. hard-pure    | sciences  |
| 4. hard-applied | computer science<br>electrical and related subject<br>built sciences<br>mechanical and related subjects<br>civil engineering<br>petroleum engineering<br>chemical engineering |

3. College grades: A five level measure of undergraduate grade point average. The response codes were 1 = general degree, 2 = third class honours, 3 = second class lower honours, 4 = second class upper honours, and 5 = first class honours (UK and Malaysian grading system). The American's cumulative grade point average grading system allocated grades from 0 to 4 points where any score below 2 point is considered as failure. A 4 points is the possible maximum score. In order to standardise the grade point system into metric form the following equivalents were used.

|      |   |      |   |
|------|---|------|---|
| 2.00 | - | 2.40 | equivalent to general degree coded as 1 |
| 2.40 | - | 2.80 | " " third class honours coded as 2      |
| 2.81 | - | 3.20 | " " 2nd class lower honour coded as 3   |
| 3.21 | - | 3.60 | " " 2nd class upper honours coded as 4  |
| 3.61 | - | 4.00 | " " 1st class honours coded as 5        |

The above standardization facilitated the use of common metric grades in the later analyses. For further explanation, please refer Table 5.07 on page 119

4. Extra-curricular activities: Questions requested graduates to furnish details regarding their activities while in post high school institution and colleges. The questions selected were thought to be on activities that will result in graduates obtaining good jobs on completion of their studies. It ranges from membership of clubs or societies, affiliation to professional organizations (Soc), part time employment experience (Part), attending a formal course on how to write

resumes (Course) or reading a book or attending a course on how to face job interviews (Int). The graduates participation in the above activities were given score up to the following maximum point.

Soc = 6 points

Part = 3 points

Course = 1 point

Int = 1 point

The weightage or maximum point of each activity was decided arbitrarily to give the level of extra curricular activities up to a maximum 11 points.

Extra curricular activities = Soc + Part + Course + Int.

5. Gender: Male coded as 0 or Female coded as 1.
6. Family socio-economic status: Three items on the questionnaires were used to measure the subjects SES: a) household's total annual income b) father's education (highest level completed) c) mother's education (highest level completed).
7. Duration of employment: Cumulative duration of employment in months since graduation.
8. Sector of employment: A dichotomous measure of the organization in which the respondent was employed, coded 1 = public, 0 = private.



9. Employer's ownership: A dichotomous measure of employer's ownership in which the respondent was employed: The codes used: local corporation = 0, foreign corporation = 1.

Dependent variable - Income Level: Respondent current (November - December 1992) annual income measured in Malaysian Ringgit.

### Likert-type Scales

The variables of self-perceived esteem, English proficiency, college preparation, job-fit index, and job satisfaction were measured using separate multi-item Likert-type scales (see questionnaire in Appendix B). Likert-type scales which measure attitudes are relatively easy to construct, can achieve high reliability coefficients, can be used with all types of populations, are easy for respondents to complete, and are easy to score and analyze when compared to other scales (Norland, 1992; Mueller, 1986). Depending on the type of questions, the Likert-type scale consisted of statements to which the respondents were asked to indicate their level of agreement or disagreement, very often to never, low to high, very dissatisfied to very satisfied, or some suitable range of attitudes. There are many variations in the scale utilised. An issue in the profession is whether the scale should be odd or even in position. Those who support even numbered categories subscribe to the opinion that if we are going to assess attitudes then we should not give people "undecided" or middle category, but make them think and decide. However there are occasions when it is valid for the respondents to be neutral or even undecided.

For example for the variable self-perceived esteem the following six-point scale was used:

- |   |   |                   |
|---|---|-------------------|
| 1 | = | Firmly disagree   |
| 2 | = | Disagree          |
| 3 | = | Slightly disagree |
| 4 | = | Slightly agree    |
| 5 | = | Agree             |
| 6 | = | Firmly agree      |

Scores for each scale were the mean value of the individual respondent's scores on all of the item in each scale. For example, for the ten-item scale in the variable global self-perceived esteem, the values for the ten items were added together and then divided by ten to arrive at a mean score for the scale.

Items in the scales were worded both positively and negatively where possible to avoid having respondents fall into a response set (Mueller, 1986). During analysis of data, the weighting of response categories for the negatively-worded items was reversed. For example, the item "I feel I do not have much to offer" was considered to be a negative statement in the overall measurement of global self-perceived esteem. Therefore, a response of "Firmly agree" would receive a score of 1 rather than 6.

The Likert-type scales were tested for reliability using an index of inter-item consistency, Cronbach's alpha. Cronbach's alpha is an

internal-consistency coefficient that identifies similarity of measurement across items (Mueller, 1986). Test data were collected by means of a pilot test of the instrument using 50 individuals randomly selected represent the population of the study. An acceptable minimum Cronbach's alpha level for the scale was set a priori at .60 based on the work of Nunnally (1967). Reliability coefficients were calculated using the pilot test data. Table 4.03 illustrates the Cronbach's alpha obtained.

Except for the value for Job Fit Index, the Cronbach's alpha obtained well above 0.60. In the case of Job Fit Index 0.5420 is considered high enough. A measure of reliability will not be high enough if the scale is based on a small number of items.

Content validity of the Likert-type scales was determined using the panel of experts to examine content areas of the scale and the context of the study. The experts were also requested to review the suitability, clarity, and wording of items in the scale and overall instrumentation development given the nature and population of the study. Except for minor changes, the instrument was judged to be content valid and suitable for the study. A discussion of the individual scales follows.

10. Satisfaction with University's Facilities: The respondents were requested to state their degree of satisfaction concerning quality of instruction received in their major, overall quality of instruction, academic advising, career guidance and counseling and job placement services. A maximum of five points was coded for each aspect giving a maximum score of 25 points. The total score



was then divided by 5, giving a variable SATISUNI (satisfaction of university's facilities) a range of score between 1 to 5.

11. Effort in Mastering Academic Subjects: the respondents were asked to state their own efforts in mastering academic subjects which varied from little to a lot, i.e., a range of 1 to 5.
12. College Preparation: A combined measure of satisfaction with university's facilities and own effort in mastering academic subjects COLEGPRES (College Preparation) = SATISUNI + effort. A higher score represents a better college preparation that could result in better employment outcomes.
13. Global self perceived esteem: To measure global self esteem in the sense described by Rosenberg (1979): ... "When we characterize a person having high self esteem ... we mean that he has self respect and considers himself a person of worth. Appreciating his own merits, he nonetheless recognises his faults ... that he hopes and expect to overcome ... The term "low self esteem" means that the individual lacks respect for himself, considers himself unworthy, inadequate, or otherwise seriously deficient as a person" (p.54). A maximum score of 60 was then divided by 10 to give a possible score between 1 to 6.

A higher score represented a higher level of global self esteem. The Cronbach's alpha for the scale from the study was 0.77. Wylie (1987) in reviewing past applications of Rosenberg self esteem scale reported seven values of alpha ranging from .72 to .87.



14. Specific self esteem: Based on the work of Janis-Field Self Esteem Scale (Brockner, 1988) relevant questions pertaining to social confidence were selected to see whether higher scores on social confidence alone or in combination with global self esteem have any effect on early employment outcomes. The respondents were requested to give answers using a five point Likert-type scale ranging from very often to never. Each item was coded from 5 to 1 depending on whether the question was positively or negatively constructed. A maximum score of 35 was divided by 7 to give a possible score of between 1 to 5. A higher score represents a greater confidence in social interaction.
  
15. Perceived English Proficiency: The record of perceived English proficiency based on the work by Xu (1991), contained 20 items divided into two sections. The first section included questions concerning respondents' perceived competence in facing various academic tasks. The second section requested the respondents to determine their competence in facing various daily and occupational tasks. Each item was weighted by the perceived importance to respondents in dealing with either their academic work or current occupational tasks. Perceived importance and abilities were coded using a five-point Likert-type scale ranging from low to moderate to high (see Q.3 of questionnaire of Appendix B). To give weighting of average importance by all respondents to each item in the instrument, the present study modified the work by Borich (1980) who developed an indirect approach to measure people's perception of their educational needs.

In this research the author adapted the work of Borich (1980) and Xu (1991) by exploring few possibilities by defining the following variables.

PROFALL = Average of self-rated 20 items English proficiency see Q3 in questionnaire.

PROFACA = Average of self-rated 12 items of academic English Proficiency (see first 12 items of Q3).

PROFJOB = Average self-rated of 8 items of general or job related English proficiency (see last 8 items of Q3).

NEEDPROF =  $(I_m - Know) I_{mav}$   
 where  $I_m$  = perceived importance score in each of the 20 items  
 $Know$  = perceived knowledge score in each of the 20 items  
 $I_{mav}$  = average perceived importance in each item by all respondents

NEEDACA =  $(I_{maca} - Know_{aca}) I_{mavaca}$   
 where  $I_{maca}$  = perceived importance score in each of the 12 items  
 $Know_{aca}$  = perceived knowledge score in each of the first 12 items in Q.3  
 $I_{mavaca}$  = perceived average importance by all respondents in each of the first 12 items in Q.3

NEEDJOB =  $(I_{mjob} - Know_{job}) I_{mavjob}$   
 where  $I_{mjob}$  = perceived importance score in each of the last 8 items of the Q.3

Knowjob = perceived knowledge score in each of the last 8 items in Q.3

Imovjob = average perceived importance by all respondents in each of the last 8 items of Q.3

Basically PROFALL described perceived English proficiency of the respondents in different usage of English based on the 20 items of Q3 of the questionnaire. PROFACA, PROJOB respectively described perceived English proficiency based on academic and job related items respectively. Accordingly NEEDPROF, NEEDACA and NEEDJOB described requirement for proficiency of English to handle the importance of the different usage situation. Respondents who scored low in NEEDPROF, NEEDACA and NEEDJOB could be interpreted as having equivalent level of proficiency when compared to the importance of usage. Whereas respondents who scored high values on the above variables could be interpreted as requiring a higher level of proficiency to handle important level of usage either academic or job situation.

16. Job fit index: Three questions requested graduates to furnish information on whether their undergraduate study fit their current full-time job in terms of status, skill utilization, and relationship to major of study. A maximum of 10 points to be coded for a perfect fit.

#### Dependent Variable - Job Satisfaction:

Overall job satisfaction was measured by a 14-items scale in

section B of the questionnaires (see Appendix B). The job satisfaction scale, based on the work by Phelan and Phelan (1983) was modified to include items measuring the five main facets of job satisfaction (Dunham & Smith, 1979): promotion, pay, the work itself, co-workers and supervision. Each question was coded from 1 to 6 depending on the way the question was designed (i.e., negative or positive) and the total score which has a maximum of 84 was divided by 14 to give a mean score. A higher score on the scale represented a higher level of job satisfaction.

Table 4.03: Summary of Reliability Analysis of Scales

| Scale Variable   | Number of items | Cronbach's |
|--|-----------------|------------|
| 1. Global self esteem  | 10              | 0.77       |
| 2. Specific self esteem  | 7               | 0.6205     |
| 3. Job fit index   | 3               | 0.5420     |
| 4. Job satisfaction  | 12              | 0.8789     |
| 5. Academic English Proficiency's importance to success        | 12              | 0.9221     |
| 6. Academic English Proficiency's self rating                  | 12              | 0.9258     |
| 7. General working English Proficiency's importance to success | 8               | 0.9265     |
| 8. General working English Proficiency self rating             | 8               | 0.9140     |
| 9. Satisfaction with university                                | 5               | 0.8272     |
| 10. College preparation  | 6               | 0.7817     |



#### 4.6 DATA COLLECTION

The method of data collection used in this study was a mail questionnaire. Additional data were collected from the registrars' offices of the local institutions and the sponsoring agency of the foreign trained students of the population, (i.e., the Malaysian Public Services Department). The current addresses of the respondents were obtained from the above offices and also from the Department of Employees Provident Fund. It was convenient for the author to locate the current addresses of most or working respondents, since it is obligatory for any employer in Malaysia who employs more than five employees on a permanent basis to contribute to this Fund.

A mail questionnaire has many strengths which made the method appropriate for this study. Mail questionnaires are relatively inexpensive, fairly easy to organise, can collect a wide scope of information from a large population, and the format is conducive to code responses for ease in statistical analysis (Miller, 1991; Norland, 1992, Dillman, 1978). Interview techniques were not used due to the limitation of time and budget and the fact that the sample of graduates was found to be working all over the country. The weaknesses of survey techniques for not being able to interact with respondents were adequately eliminated after the pilot test. Case study techniques were not used in this research since the author was hoping the empirical finding of the nationwide survey will be useful for the decision maker to work on the policy decisions which is applicable for the country.

Fifteen graduates were selected to participate in a field test on July 13, 1992, and face-to-face interviews were also conducted to determine the suitability of the questionnaires in describing the objectives of the study (See Appendix B(1)). Some of the comments made by the fifteen graduates regarding the field test were taken into consideration when re-designing the subsequent questionnaire. Their comments, such as questions were too long, led to question being re-worded in order to make them more precise and clear. A few modifications to typing mistakes and grammatical errors were also done on the questionnaires as a result of this field test.

A random sample of 50 graduates was selected and a pilot test was mailed to them on July 29, 1992. The same set of questionnaires were sent to them a week later for a retest. Telephone calls were made to the non-respondents to ensure maximum responses.

Only questions on job satisfaction were adjusted by eliminating two items, i.e., reducing 14 items to 12 items. On doing so the Cronbach alpha for Job Satisfaction was increased from 0.8243 to 0.8789. The two questions or items eliminated were both negative questions:

- i) My job responsibilities are too broad for one person to accomplish
- ii) I need more resources to do my job.

The author suspected that the respondents were confused in the expectation of the answers when the questions were phrased in the negative way.

The questionnaire was mailed on November 1992 to 661 graduates. Included in the mailing were: a cover letter (see Appendix D) explaining the purpose of the study, the need for the subject's input, assurance of confidentiality, and instructions to complete and return the questionnaire; the supporting letters from the Director of Public Service Department (see Appendix D) and a copy of the questionnaire; and a self-addressed stamped envelope in which to return the completed questionnaire. As a token one book-mark and a ball point pen were included in the questionnaire packet. The dateline for returning the completed questionnaire which was indicated in the cover letter was November, 14, 1992.

The exercise of determining the addresses was carried out in September - October, 1992 and the questionnaires were mailed early November 1992. Subsequent follow-up by telephones and reminders was carried in the whole two months of November and December and the last date the responses were accepted was 31st December 1992.

661 addresses which consist of 365 foreign trained graduates and 296 local graduates were successfully traced by the end of October. Out of this number only 408 respondents were usable, resulting in a data sample of 7.8% of the population. (A total of 5229 graduates were considered as the population of the study, see Table 4.01 page 91). 408

responses out of 661 which represented 61.2% response rate, is in the author's mind, a very comfortable figure to work on and would be able to offer some valid conclusion.

One of the strong points of this research was the ability to trace the respondents' addresses and to secure 61.2% response rate, which is rather high for a survey that used mailed questionnaires.

#### **4.7 DATA ANALYSIS**

The data collected from this study were analyzed using the personal computer version of the Statistical Package for the Social Science (SPSS/PC+), Window Version 5.0. The selection of procedures for data analysis was guided by the purpose of the research, and the scales of measurement of the variables influence the appropriate statistical analyses used (Hopkins, Glass, and Hopkins, 1987). Descriptive statistics were used to organize and summarize the data. Percentage and measures of central tendency were used to describe the data. t-tests were used to compare the differences in each variable between graduates who were trained locally or overseas.



## **CHAPTER V**

### **RESEARCH FINDINGS (1)**

#### **5.0 INTRODUCTION**

One of the objectives of this study was to describe and compare two cohorts of graduates of their childhood, aspects of their schooling, family background, their performances in college, and their job experiences. These variables together with some of the job characteristics they were involved were then used as antecedents to employment outcomes which specifically concentrated on income and job satisfaction. In order to give a complete picture of the origins of the two cohorts, some of the characteristics are additions to what has been discussed in earlier chapters. The above comparisons are necessary to enable us to measure the employment outcomes of the two cohorts of graduates.

#### **5.1 CHARACTERISTICS OF THE TWO COHORTS (FOREIGN TRAINED AND LOCALLY TRAINED GRADUATES)**

The comparison between the two cohorts is described by dividing the characteristics into categories of between college effect, within college effect, conditional college effect and job related effect.

## Between College Effects

### College Origin/Location of Study

Table 5.00 reports the distribution of universities/colleges of the respondents.

Table 5.00 Distribution of Respondents by Location of Study

| Locally Trained Graduates      |           |             | Foreign Trained Graduates |           |           |
|--------------------------------|-----------|-------------|---------------------------|-----------|-----------|
|                                | N         | %           |                           | N         | %         |
| a. University of Malaya        | 44        | 25.9        | a. Colleges in USA        | 182       | 76        |
| b. University of Technology    | 72        | 42.4        | b. Colleges in UK         | <u>56</u> | <u>24</u> |
| c. Islamic International Univ. | 23        | 13.5        |                           | 238       | 100       |
| d. MARA Institute of Tech.     | <u>31</u> | <u>18.2</u> |                           |           |           |
|                                | 170       | 100         |                           |           |           |

Table 5.01 reports distribution of graduates in colleges in USA according to composite ranking and the distribution of graduates in universities and polytechnics in United Kingdom.

Table 5.01 Distribution of Graduates in Colleges in USA and United Kingdom.

| 1. | USA            | No. | %    |
|----|----------------|-----|------|
|    | Top 50's       | 24  | 13   |
|    | 51 - 100       | 20  | 11   |
|    | 101 - 150      | 15  | 8.2  |
|    | 151 - 200      | 22  | 12.1 |
|    | 201 - 250      | 13  | 7.1  |
|    | 251 - 300      | 21  | 11.5 |
|    | 301 - 350      | 8   | 4.4  |
|    | 351 - 400      | 5   | 2.7  |
|    | 401 - 450      | 4   | 2.1  |
|    | 451 & below    | 50  | 27.4 |
|    | Total          | 182 | 100  |
| 2. | United Kingdom | No  | %    |
|    | Universities   | 28  | 50   |
|    | Polytechniques | 28  | 50   |
|    | Total          | 56  | 100  |

Almost 73% of the respondents who studied in the USA universities did so in the top 450 schools. The ranking used is a composite score was developed by Malaysia House in Indiana University, Bloomington (1990). It composed of equal weightage of different rankings of Barron's, Gourmen, Fiske and US News & World Reports. Barron's ranking of colleges based on the quality of high schools' qualification of the intakes. It averages various scores of national based

and individual high school examinations like SAT (Scholastic Aptitude Test), Enhanced ACT (American College Testing) high school class ranks and grade point averages. The calculation of the ranking also incorporated the percentage of applicants who were accepted by each university.

Gourman's ranking is based on 14 criteria ranging from age of the institutions, faculty qualification and experiences, total educational programmes offered and degrees conferred, students scholastic works, basis for the requirement for admission of students, number of students enrolled, curricular contents, quality of instruction, administration, quality and availability of other services such as counselling and career placement services, quality of physical plant, finances (expenditure and sources of incomes), library and finally auspices, control and organisation of the institutions.

U.S. News and World Reports ranks the academic quality based on students selectivity, placement success, faculty resources and reputation as was determined the survey carried out by U.S. News & World Reports.

Fiske system of rating of selected universities concentrates on three areas: academic, social life and quality of life. Fiske academic rating was used for the composite ranking adopted in this research. Basically academic ranking is a judgement about the overall academic climate of the institution, including its reputation in the academic world,



the quality of the faculty, the level of teaching and research, the academic ability of students, the quality of libraries and other facilities, and the level of academic seriousness among students and faculty members.

However, it is important to stress that, there is no absolute ranking for all institutions of higher learning in USA. This is due to the fact that different publications based their ranking on different criteria. It ranged from very objective criteria such as age of institution, faculty qualification and experience, difficulty in admission and size of library to very subjective judgement toward particular institution such as quality of curriculum, public judgement, faculty judgement and image. The absolute ranking is of no importance since one may have the opinion that Harvard is the number one institution in USA instead of other universities like Stanford or Massachusset Institute of Technology. This opinion may not be agreeable to another person. However most people would accept the claim that the three universities fall into the category of top ten universities in USA. Similar argument could be said about the categories of other universities.

Graduates who studied in United Kingdom did so in equal proportion in universities and polytechnics (However since 1992 all polytechnics in UK were converted to university status).

However, for the purpose of analysis, and on ignoring outliers, i.e., ignoring respondents who reported extreme level of incomes, only 385 cases were used. 385 out 661, i.e., 58% response rate is

sufficiently good enough for analysis to enable the author to draw some plausible conclusions from this research. The adjusted distribution of graduates according to location of study is shown in Table 5.02

Table 5.02 Adjusted Distribution of Respondents by Location of Study

| Locally Trained Graduates      |            |            | Foreign Trained Graduates |            |            |
|--------------------------------|------------|------------|---------------------------|------------|------------|
|                                | N          | %          |                           | N          | %          |
| a. University of Malaya        | 41         | 25.15      | a. Colleges in USA        | 169        | 76.13      |
| b. University of Technology    | 68         | 41.72      | b. Colleges in UK         | 53         | 23.87      |
| c. Islamic International Univ. | 23         | 14.11      |                           | <u>222</u> | <u>100</u> |
| d. MARA Institute of Tech.     | 31         | 19.01      |                           |            |            |
|                                | <u>163</u> | <u>100</u> |                           |            |            |

**WITHIN COLLEGE EFFECTS.**

Undergraduate Majors

Table 5.03 compares majors of studies undertaken by locally trained and foreign trained graduates.

Table 5.03 A Comparison of Undergraduates Majors by Location of Study

| Majors                                    | Locally Trained |      | Foreign Trained |      | Total |      |
|---|-----------------|------|-----------------|------|-------|------|
|   | No.             | %    | No.             | %    | No.   | %    |
| 1. Humanity                               | 7               | 4.3  | 14              | 6.3  | 21    | 5.5  |
| 2. Economics                              | 22              | 13.6 | 19              | 8.6  | 41    | 10.7 |
| 3. Business Mgmt                          | 30              | 18.5 | 34              | 15.4 | 64    | 16.7 |
| 4. Accounting/Finance                     | 16              | 9.9  | 31              | 14.0 | 47    | 12.3 |
| 5. Science                                | 11              | 6.8  | 17              | 7.7  | 28    | 7.3  |
| 6. Computer Science                       | 11              | 6.8  | 16              | 7.2  | 27    | 7.0  |
| 7. Electrical Eng./<br>related field      | 16              | 9.9  | 19              | 8.6  | 35    | 9.1  |
| 8. Build Science<br>(Arch., Building etc) | 13              | 8.0  | 14              | 6.3  | 27    | 7.0  |
| 9. Mechanical Eng./<br>related field      | 19              | 11.7 | 33              | 14.9 | 52    | 13.6 |
| 10. Civil Eng.                            | 13              | 8.0  | 14              | 6.3  | 27    | 7.0  |
| 11. Petroleum/mining                      | 3               | 1.9  | 3               | 1.4  | 6     | 1.5  |
| 12. Chemical Eng.                         | 1               | 0.6  | 7               | 3.2  | 8     | 2.1  |
| Total                                     | 162             | 100  | 221             | 100  | 383   | 100  |

To determine whether there is any association between location of study (foreign or local) and major of studies, a chi-square test was performed. The test yielded 9.539 with 11 degrees of freedom, is not significant. This implies that major of studies are independent of location of study or the number of graduates in any major does not depend on location of study. With this result it is now more meaningful to com-

pare the other characteristics of the two cohorts of graduates knowing that they follow similar major of studies.

For the purpose of further analysis, the majors were further classified into 4 broad categories, using classification used by Biglan (1973). The categorization of majors are as follows; soft-pure, soft-applied, hard pure and hard applied.

The broad categories encompassed the following majors.

| <u>Category</u> | <u>Majors</u>   |
|-----------------|---|
| 1. soft-pure    | humanity  |
| 2. soft-applied | economics<br>business management<br>accounting/finance  |
| 3. hard-pure    | sciences  |
| 4. hard-applied | computer science<br>electrical related engineering<br>built science<br>mechanical & related engineering<br>civil engineering<br>petroleum engineering<br>chemical engineering |

Table 5.04 indicated the distribution of respondents according to the major classification of majors.



Table 5.04 A Comparison of Broad Majors by Location of Study

| Majors       | Local<br>trained graduates | Foreign<br>trained graduates | Total       |
|--------------|----------------------------|------------------------------|-------------|
| soft-pure    | 7 (4.3%)                   | 14 (6.3%)                    | 21 (5.5%)   |
| soft-applied | 68 (42%)                   | 84 (38%)                     | 152 (39.7%) |
| hard-pure    | 11 (6.8%)                  | 17 (7.7%)                    | 28 (7.3%)   |
| hard-applied | 76 (46.9%)                 | 106 (48%)                    | 182 (47.5%) |
| Total        | 162 (100%)                 | 221(100%)                    | 382 (100%)  |

A Chi-square test that was carried out gave a value of 1.18773 with 3 df, which is not significant which again indicating the number of graduates in any broad major of studies does not depend or independent of location of study.

#### Duration to Complete Degree Courses

The duration of time it takes a graduate to complete his or her study would have implication on the amount of money spent. A comparison was made concerning the time for the two cohorts of graduates spent in universities after high school. Table 5.05 shows locally trained graduates spent longer time, i.e., 68.65 months, longer than the time spent by foreign trained graduates (60.59 months). The t-test carried indicated that the different in time spent is significant at 0.05 (0.0005).

Table 5.05 A Comparison of Duration to Complete Degree Course by Location of Study

| TIMEUNI<br>Graduates | Number<br>of Cases | Mean    | SD     | SE of Mean |
|----------------------|--------------------|---------|--------|------------|
| Locally trained      | 144                | 68.6528 | 11.759 | .980       |
| Foreign trained      | 217                | 60.5991 | 9.03   | .613       |

Mean Difference = 7.0537

\* Levene's Test for Equality of Variances: F = 13.782 P = .0005

| t-test for Equality of Means |         |        |            |            | 95%            |
|------------------------------|---------|--------|------------|------------|----------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff    |
| *Unequal                     | 6.10    | 251.34 | .000       | 1.156      | (4,777, 9.331) |

**Note\*:** When t-test was used for the above comparison of mean, appropriate statistic was used to overcome the problem of instability of variances of the data or to overcome heteroscedasticity effect. Similar procedures was used for subsequent comparison of means. In this case, for unequal variance, a correction factor proposed by Welch (1947) was used in order to make the comparison procedure more robust with respect to the normality and equality of variances assumptions.

### University Grades

Academic achievement was measured by the cumulative grade

point average (CGPA) . An arbitrary standardisation of American System of CGPA with the British/Malaysia system was made as shown in Table 5.06. The standardisation is very arbitrary, bearing in mind the difficulty to compare the standard of evaluation even from one department to another in one university or from one university to another, let alone from one country to another.

Table 5.06 Equivalents of Academic Performance

| British/Malaysia      | CGPA (Cumulative Grade Point Average) |      |
|-----------------------|---------------------------------------|------|
| Pass (General Degree) | 2.00                                  | 2.40 |
| Third Class Honours   | 2.41                                  | 2.80 |
| 2nd Class Lower       | 2.81                                  | 3.20 |
| 2nd Class Upper       | 3.21                                  | 3.60 |
| 1st Class             | 3.61                                  | 4.00 |

Table 5.07 shows the comparison of the academic grades of two groups of graduates (result of t-test)

Table 5.07 A comparison of University Grade by Location of Study

| University grade | Number of Cases | Mean   | SD   | SE of Mean |
|------------------|-----------------|--------|------|------------|
| Graduates        |                 |        |      |            |
| Local            | 158             | 2.7152 | .904 | .072       |
| Foreign          | 214             | 2.8271 | .916 | .063       |

Mean Difference = -.1119

Lavene's Test for Equality of Variances: F = .341 P = .560

| t-test for Equality of Means |         |     |            |            | 95%           |
|------------------------------|---------|-----|------------|------------|---------------|
| Variances                    | t-value | df  | 2-tail Sig | SE of diff | CI for diff.  |
| Equal                        | -1.17   | 370 | .242       | .096       | (-.300, .076) |

Although the grades of foreign trained graduates were higher than the grades of the locally trained graduates, i.e., 2.83 vs 2.72, the difference is not statistically significant. t-test administered indicated a level of significance of 0.242. One possible explanation for this slight difference in grades was that foreign graduates, despite having better SPM grades than local graduates when selected to go abroad, had to face a rigorous academic curriculum marked by a substantial degree of independent study. The foreign graduates also had to compete in a heterogeneous environment which possibly could be more competitive than a local environment.

### Extra Curricular Activities

Activities that were included in this instrument were thought of to be helpful for graduates in getting good employment after completing their studies. Out of possible 11 points, a graduate could score points by participating in societies/club/associations/professional affiliation, involved in part-time job, activities related to job search and or involved in activities for self-improvement (see page 95). Foreign trained graduates scored a mean of 5.18, whereas locally trained graduates are less active with scores of 3.66. Table 5.08 compared the two level of curricular activities by location of study.



Table 5.08 A Comparison of Extra Curricular Activities  
by Location of Study

| Activities      | Extra Curricular activities | Number of Cases | Mean   | SD    | SE of Mean |
|-----------------|-----------------------------|-----------------|--------|-------|------------|
| Local trained   |                             | 163             | 3.6564 | 2.374 | 0.186      |
| Foreign trained |                             | 222             | 5.1757 | 2.309 | .152       |

Mean Difference = -1.5192

Levene's Test for Equality of Variances: F = 0.06 P = .807

| t-test for Equality of Means |         |     |            |            | 95%             |
|------------------------------|---------|-----|------------|------------|-----------------|
| Variances                    | t-value | df  | 2-Tail Sig | SE of diff | CI for diff     |
| Equal                        | -6.30   | 383 | .0005      | .241       | (-1.993,-1.045) |

The foreign trained graduates are more active than the locally trained graduates and the difference is significant at 0.05 (0.0005). For the discussion of the result see page

### College Preparation

This variable was chosen to give an insight into the aspect of facilities and services given by the universities. The respondents were requested to grade the satisfaction according to 5 main areas i.e

(i) quality of instruction in major field, (ii) overall quality of instruction, (iii) academic advising, (iv) career guidance and counselling, and (v) quality of job placement. The linear combination of 5 scores from 1 to 5 each which was divided by 5 were recorded. This combination which is called as satisfaction with university (SATISUNI) was then compared for the two cohorts of graduates. Table 5.09 compares the satisfaction with university's facilities by location of study.

Table 5.09 A Comparison of Satisfaction with University's Facilities and Location of Study.

| SATISUNI<br>Graduates | Number of Cases | Mean   | SD   | Se of Mean |
|-----------------------|-----------------|--------|------|------------|
| Locally trained       | 150             | 3.3640 | .746 | .061       |
| Foreign trained       | 207             | 3.4184 | .715 | .050       |

Mean Difference = - .0544

Levene's Test for Equality of variances:  $f = .022$   $P = .883$

t - test for Equality of Means

95%

| Variance | t-value | df  | 2-Tail sig | SE of diff | CI for diff   |
|----------|---------|-----|------------|------------|---------------|
| Equal    | -.69    | 355 | .487       | .078       | (-.208, .099) |

The t-test administered indicated that there was no significant difference with satisfaction with universities facilities by the two cohorts of graduates.

On examining the details, low scores were recorded by foreign trained graduates on the aspect of job placement services. See Table 5.10. The fact that the foreign trained graduates were expected to return to the home country made it possible that students did not get a lot of help from the universities on matters concerning job placement services. However the mean score of SATISUNI for foreign graduates is slightly higher than that of locally trained graduates (3.42 vs 3.36). This speaks well of the satisfaction foreign trained graduates felt about the quality of instruction, academic advising and career guidances and counselling. In fact the foreign trained graduates rated themselves significantly higher in satisfaction with the overall quality of instruction.

Table 5.10 A comparison of Satisfaction with University's Services and Location of Study

| University's services                             | Locally Trained Graduates |              | Foreign Trained Graduates |              | t-Value and level of significant |     |               |
|---|---------------------------|--------------|---------------------------|--------------|----------------------------------|-----|---------------|
|   | Mean                      | No. of Cases | Mean                      | No. of Cases | t-Value                          | df  | Level of Sig. |
| The quality of instruction in major field program | 3.62                      | 155          | 3.72                      | 214          | -1.21                            | 367 | 0.229         |
| The overall quality instruction                   | 3.48                      | 155          | 3.69                      | 214          | 2.67                             | 367 | 0.008         |
| The quality of academic advising                  | 3.45                      | 155          | 3.54                      | 214          | 0.85                             | 367 | 0.394         |
| The quality of career guidance & counselling      | 3.1                       | 152          | 3.20                      | 212          | 0.79                             | 362 | 0.43          |
| The quality of job placement service.             | 3.16                      | 152          | 2.92                      | 208          | 2.06                             | 358 | 0.04          |

Another aspect constituting college preparation was mastering the most crucial aspect of university education, i.e., mastering the academic subjects. A score of 1 to 5 that described "too little" to "a lot" was recorded and compared between the two cohorts of graduates. Table 5.11 indicated this comparison.



Table 5.11 A comparison of Effort in Mastering Academic subjects by Location of Study

| Graduates       | Effort in mastering academic | Number of Cases | Mean   | SD    | SE of Mean |
|-----------------|------------------------------|-----------------|--------|-------|------------|
| Locally trained |                              | 160             | 3.2625 | 0.963 | .076       |
| Foreign trained |                              | 221             | 3.6425 | 0.936 | .063       |

Mean Difference = -.0800

Levene's Test for Equity of Variances: F = .044 P = .833

t-test for Equity of Means

95%

| Variances | t-value | df  | 2-Tail Sig | SE of diff | CI for diff   |
|-----------|---------|-----|------------|------------|---------------|
| Equal     | -.81    | 379 | .416       | .098       | (-.273, .113) |

The result indicated that foreign trained graduates rate themselves slightly higher effort to master academic subjects. However this difference is not significant.

The variable "college preparation" which combined linearly the SATISUNI and effort in mastering academic subject was recorded and compared for the two cohorts. Table 5.12 indicated the comparison by t-test.

Table 5.12 A comparison of College Preparation by Location of Study

| Graduatés | College Preparation | Number of Cases | Mean   | SD    | SE of Mean |
|-----------|---------------------|-----------------|--------|-------|------------|
|           | Locally trained     | 148             | 6.9270 | 1.316 | .108       |
|           | Foreign trained     | 206             | 7.0748 | 1.278 | .089       |

Mean Difference = -.1477

Levene's Test for Equity of Variances: F = 0.005 P = .985

t-test for Equity of Means

95%

| Variances | t-value | df  | 2-Tail Sig | SE of diff | CI for diff   |
|-----------|---------|-----|------------|------------|---------------|
| Equal     | -1.06   | 352 | .290       | .139       | (-.422, .127) |

There was no significant different in the variable 'college preparation' by the two cohorts of graduates.

## Conditional Effects

### Personal Background

#### Gender

About two-thirds (65%) of the respondents were male and 35% were female. Both cohorts resembled these proportions, with local graduates having a slightly higher percentage of male which is 111 (70%) as compared to the 141 (65%) male among the foreign trained graduates.

Table 5.13 compares gender differences by college origin.

Table 5.13 A Comparison of Respondents Gender by Location of Study

| Gender<br>Graduates | Males |      | Females |      | Total |      |
|---------------------|-------|------|---------|------|-------|------|
|                     | No.   | Col% | No.     | Col% | No.   | Col% |
| Locally Trained     | 111   | 44   | 52      | 39   | 163   | 42   |
| Foreign Trained     | 141   | 56   | 81      | 61   | 222   | 58   |
| Total               | 252   | 100  | 133     | 100  | 385   | 100  |

Chi-square test carried out indicated that the proportion of males and females amongst the two groups are not significantly different.

Age

The age of the two cohorts of graduates were compared by t-test as indicated in Table 5.14

The foreign trained graduates have a mean age of 24.7051 years which is younger than the average age of locally trained graduates (26.2013 years). The difference in age is statistically significant at confidence level of 0.05 (0.0005), i.e., on average locally trained graduates are older than foreign trained graduates.

Table 5.14 A Comparison of Respondent's Age by Location of Study

| Age<br>Graduates | Number<br>of Cases | Mean    | SD    | SE of Mean |
|------------------|--------------------|---------|-------|------------|
| Locally trained  | 159                | 26.2013 | 3.085 | .245       |
| Foreign trained  | 217                | 24.7051 | .916  | .062       |

Mean Difference = 1.4962

Levene's Test for Equality of Variances: F = 45.297 P = .0005

| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| Unequal                      | 5.93    | 178.52 | .0005      | .252       | (.998, 1.994) |



## Father's Education

One component used in measuring family SES (Socio Economic Status) was the highest level of education attained by the respondent's father. Table 5.15 reports these findings by location of study and reports the modes level for each cohort.

Table 5.15 A Comparison of Father's Education Level by Location of Study

| Educational level                         | Number of Respondents     |                           | Total       |
|---|---------------------------|---------------------------|-------------|
|   | Locally trained graduates | foreign trained graduates |             |
| 1. No formal schooling                    | 28 (18.2%)                | 18 (8.2%)                 | 46 (12.3%)  |
| 2. Village religious school               | 24 (15.6%)                | 11 (5.0%)                 | 35 (9.4%)   |
| 3. Some primary school                    | 60 (39%)                  | 74 (33.6%)                | 134 (35.8%) |
| 4. Completed form three or equivalent     | 7 (4.5%)                  | 24 (10.9%)                | 31 (8.3%)   |
| 5. Completed form five or equivalent      | 9 (5.8%)                  | 30 (13.6%)                | 39 (10.4%)  |
| 6. Completed form six or equivalent       | 12 (7.8%)                 | 25 (11.4%)                | 37 (9.9%)   |
| 7. Completed non-univ. tertiary education | 11 (7.1%)                 | 23 (10.5%)                | 34 (9.1%)   |
| 8. Holds university degree                | 3 (1.9%)                  | 15 (6.8%)                 | 18 (4.8%)   |
|   | 154 (100%)                | 220 (100%)                | 374 (100%)  |

To determine whether significant differences existed among the cohorts for level of father's education, chi-square tests were performed. The test yielded a result of 32.35 with 7 df which is significant (0.05).

The mode for the two cohorts is primary school. Treating the levels as ordinal values, the level of education of the fathers of the locally trained graduates achieves mean of 3.2597, i.e., between primary school and completing form three or equivalent.

The fathers of foreign trained graduates have a mean of 4.2682 which is a step higher than the education level of the fathers of locally trained graduates, i.e. between completing form three and form five in the secondary school. On average the fathers of foreign trained graduates have a slightly higher educational level than the fathers of locally trained graduates. Although a majority of these two sets of fathers' did not have a college education, their children continue on to college indicating that heavily subsidised local academi institutions and the availability of scholarships to study abroad have enabled the children to pursue a college education, unlike their fathers.

#### Mothers' Education:

Another variable used in measuring family socio-economic status was educational level attained by the subject's mother. Table 5.16 reports these findings by location of study as well as reporting mode level for each cohort.

Table 5.16 A Comparison of Mothers' Education Level by Location of Study

| Educational level                         | Number of Respondents     |                           | Total       |
|---|---------------------------|---------------------------|-------------|
|   | Locally trained graduates | foreign trained graduates |             |
| 1. No formal schooling                    | 47 (30.1%)                | 40 (18.2%)                | 87 (23.2%)  |
| 2. Village religious school               | 21 (13.5%)                | 9 (4.1%)                  | 30 (8.0%)   |
| 3. Some primary school                    | 56 (35.9%)                | 89 (40.5%)                | 145 (38.6%) |
| 4. Completed form three or equivalent     | 9 (5.8%)                  | 27 (12.3%)                | 36 (9.6%)   |
| 5. Completed form five or equivalent      | 12 (7.7%)                 | 23 (10.5%)                | 35 (9.3%)   |
| 6. Completed form six or equivalent       | 8 (5.1%)                  | 14 (6.4%)                 | 22 (5.9%)   |
| 7. Completed non-univ. tertiary education | 3 (1.9%)                  | 18 (8.2%)                 | 21 (5.6%)   |
| Total                                     | 156 (100%)                | 220(100%)                 | 376 (100%)  |

The mode of both groups was attending "some primary school".

Treating the level of education as ordinal data, mothers of local trained graduates scored 2.71 i.e., between village religious school and some primary school. Mothers of foreign trained graduates scored 3.445, i.e., one step higher, i.e., between some primary school and form three of secondary school.

A Chi-square test was performed and, it yielded 29.45 with 6 df which is significant at 0.05 (0.00005). Hence, on the average the mothers' of the foreign trained graduates have undergone a slightly higher education level compared to the mothers of locally trained graduates. It could be noted that not a single mother of the respondents has a university degree qualification. On average the mothers of the graduates were less qualified than the fathers, and this is congruent with the finding of the preceding section in which it was found that higher education opportunities have benefitted the low educated families.

#### Family Yearly Income

A third variable used in determining family SES was the respondents' yearly income at the time the survey was carried out. Although other researchers surveyed the yearly income of the parents when the respondent was in the high school this particular study did not follow suit to ensure the accuracy of information. Table 5.17 reports these findings by location of study as well as reporting the mode salary level for each cohort.



Table 5.17 A Comparison of Respondents' Family Yearly Income and Location of Study

|                 | Locally trained graduates |        | Foreign trained graduates |        | Total |        |
|-----------------|---------------------------|--------|---------------------------|--------|-------|--------|
|                 | No.                       | Col. % | No.                       | Col. % | No.   | Col. % |
| Below RM4500    | 48                        | 29.8   | 31                        | 14.1   | 79    | 20.7   |
| RM4501 - 7200   | 38                        | 23.6   | 45                        | 20.5   | 83    | 21.8   |
| RM 7201 - 12000 | 30                        | 18.6   | 49                        | 22.3   | 79    | 20.7   |
| RM12001-24000   | 33                        | 20.5   | 48                        | 21.8   | 81    | 21.2   |
| RM24001-36000   | 7                         | 4.3    | 21                        | 9.5    | 28    | 7.3    |
| above 36000     | 5                         | 3.1    | 26                        | 11.8   | 31    | 8.1    |
|                 | 161                       | 100    | 220                       | 100    | 381   | 100    |

For locally trained graduate the most frequently reported yearly income of their parent was between RM0.00 to RM4500, i.e. a total of 29.8%. Another big percentage of 23.6% was reported for yearly income of RM4501 - 7200. Only 3% of their parents reported a yearly income of above RM36000. For foreign trained graduates, the most frequently reported yearly income of their parent was between RM7201 - 12000, i.e., a total of 22.3%. 11.8% of their parents reported a yearly income above RM36000.

To determine the significance of these differences of parents' income, a Chi-square test was performed. The test yielded  $\chi^2 = 24.35$  with 5 degrees of freedom which is significant at 0.05 (0.00045).

Socio Economic Status

A measure of socio-economic status as equal to father's education + mother's education + total family income was used for the purpose of this research. Looking at the previous result, this measure should vary from 3 to 19. A comparison was made by using a t-test to see whether there is a significant difference in the level of socio-economic status between the two cohorts of graduates. Table 5.18 shows the comparison of socio-economic status of the two groups.

Table 5.18 A Comparison of Socio-economic Status by Location of Study

| SOCIOECO<br>Graduates | Number of Cases | Mean    | SD    | SE of Mean |
|-----------------------|-----------------|---------|-------|------------|
| Locally trained       | 149             | 8.5503  | 4.378 | .359       |
| Foreign trained       | 217             | 11.2949 | 4.928 | .335       |

Mean Difference = -2.7446

Levene's Test for Equality of Variances: F = 6.176 P = 0.013

| t-test for Equality of Means |         |        |            |            | 95%             |
|------------------------------|---------|--------|------------|------------|-----------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff     |
| Unequal                      | -5.60   | 340.78 | .000       | .490       | (-3.710,-1.780) |

Table 5.19 A Comparison of Types of High School the Two Cohorts Attended

|                 | Good School |       | Average School |       | Total |       |
|-----------------|-------------|-------|----------------|-------|-------|-------|
|                 | No.         | Col.% | No.            | Col.% | No.   | Col.% |
| Locally trained | 74          | 33.3  | 86             | 54.1  | 160   | 42    |
| Foreign trained | 148         | 66.7  | 73             | 45.9  | 221   | 58    |
| Total           | 231         | 100   | 173            | 100   | 404   | 100   |

High School Grade (SPM - Sijil Pelajaran Malaysia Grade)

After studying for five years in the high school, students were required to sit for a national exam called Sijil Pelajaran Malaysia (SPM) which is equivalent to the British O Level. Among the 162 locally trained graduates reported, 117 (72.2%) scored grade 1, 38 (23.5%) scored grade 2 and 7 (4.7%) scored grade 3. Among the 222 foreign trained graduates 220 (99.0%) scored grade 1, 2 (1%) scored grade 2 and none in the grade 3.

Table 5.20 shows different grade of SPM grades the two cohorts scored.

Table 5.20 A Comparison of SPM by Location of Study

|                 | SPM Grades |       |     |       |     |       | Total<br>No. Col.% |       |
|-----------------|------------|-------|-----|-------|-----|-------|--------------------|-------|
|                 | 1          |       | 2   |       | 3   |       |                    |       |
|                 | No.        | Col.% | No. | Col.% | No. | Col.% | No.                | Col.% |
| Locally trained | 117        | 34.7  | 38  | 95    | 7   | 100   | 162                | 42.2  |
| Foreign trained | 220        | 65.3  | 2   | 5     | 0   | 0     | 222                | 57.8  |
| Total           | 360        | 100   | 40  | 100   | 7   | 100   | 407                | 100   |

To determine whether significant difference existed among college origin and (SPM) grade obtained, a Chi-square test was performed. The test yielded a result of 63.04 with 2 degree of freedom and it is significant and 0.05 (0.00005) which indicated at foreign trained graduate have better SPM scores compared to locally trained graduates.

This is by- no means surprising since it is the policy of the governments' sponsoring agencies to sponsor only high achievers among the high school graduates.



Aggregate of Best Five Subjects in the SPM Examination

The 151 locally trained graduates who responded scored a mean of 19.8 points in the aggregate of best 5 subjects. The 209 foreign trained graduates scored a mean of 14.38. The best possible score is 5 points and the worst score would be 45 point.

As Table 5.21 reports, in the score for 5 best subjects, the mean foreign trained graduates is better than that of locally trained graduates. On administrering t-test, the difference is significant at 0.05 (0.00005).

Table 5.21 A Comparison of Respondents Score of Best  
5 Subjects in SPM Examination by Location of Study

| Aggregate of best 5 subjects<br>Graduates | Number of Cases | Mean    | SD    | SE of Mean |
|---|-----------------|---------|-------|------------|
| Local trained graduates                   | 151             | 19.8344 | 5.956 | 485        |
| Foreign trained                           | 209             | 14.38   | 4.263 | 295        |

Mean Difference = 5.4564

Levene's Test for Equality of Variances: F = 19.559 P = .000

| t-test for Equality of Means |         |        |            |            | 95%            |
|------------------------------|---------|--------|------------|------------|----------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff    |
| Unequal                      | 9.62    | 256.25 | .000       | .567       | (4.339, 6.574) |

## The Grades of English Communication Subject in SPM Examination

To examine further the quality of achievement in the high school examination the grade of a compulsory SPM subject English Communication was compared between the two cohorts. The 143 local graduates who responded scored an average of 5.85. 205 foreign trained graduates scored an average of 3.97. (The best score is 1.0 and the worst score is 9.0).

As Table 5.22 reports, the mean score for English Communication subject for foreign trained graduates is better than that of locally trained graduates. The difference is significant at 0.05 (0.0005). The findings including of the last two preceding sections are of no surprise since the government has the policy of only awarding scholarships to those who have achieved good passes in the English Communication subject and good pass in SPM examination.

Table 5.22 A Comparison of Respondents' Score of English Communication Subject in SPM Examination by Location of Study

| English Comm. grade | Number of Cases | Mean   | SD    | SE of Mean |
|---------------------|-----------------|--------|-------|------------|
| Graduates           |                 |        |       |            |
| Locally trained     | 143             | 5.8531 | 2.458 | .206       |
| Foreign trained     | 205             | 3.9756 | 1.956 | .137       |

Mean Difference = 1.8900

Levene's Test for Equality of Variances: F = 10.950 P = .001

| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| Unequal                      | 7.61    | 259.91 | .000       | .247       | (1.391,2.364) |

### Personal Motivation

Graduates were requested to rate themselves of their own feelings about themselves or self esteem using the two instruments of global self-esteem and specific self-esteem.

Global Perceived Self-Esteem

Global Perceived Self-esteem was measured using a combination of ten questions developed by Rosenberg (1979). As can be seen, the questionnaires (page 7, Q.1) consist of a combination of negative and positive questions and the raw scores of 1 to 6 associated with "fully disagree" to "strongly agree" were adjusted according to these types of questions. An Average maximum of 6 points could be interpreted as having a very high perceived self-esteem, whereas an average of 1 indicated a very low perceived self-esteem.

Table 5.23 compares the score of perceived self-esteem by college origins.

Table 5.23 A Comparison of Perceived Average Self-esteem by Location of Study

| SELFESTEEM      | Number of Cases | Mean   | SD    | SE of Mean |
|-----------------|-----------------|--------|-------|------------|
| Graduates       |                 |        |       |            |
| Locally trained | 152             | 4.3711 | 0.653 | .053       |
| Foreign trained | 215             | 4.6121 | 0.712 | .049       |

Mean Difference = -.2410

Levene's Test for Equality of Variances: F = 1.335 P = .249



| t-test for Equality of Means |         |     |            |            | 95%           |
|------------------------------|---------|-----|------------|------------|---------------|
| Variances                    | t-value | df  | 2-Tail Sig | SE of diff | CI for diff   |
| Equal                        | -3.30   | 365 | .001       | .073       | (-.384,-.098) |

Foreign trained graduates recorded a higher level of self-esteem (4.61 vs 4.37) and the difference is significant at 0.05.

### Specific Self-Esteem

Another instrument which was based on Janis Field Self-esteem scale (Brockner, 1988) was used in this research (Q2 in page 7 of the questionnaire). This instrument measures the level of social skill in people interaction among the respondents. Both cohorts give almost similar score as indicated in the Table 5.24.

Table 5.24 A Comparison of Level of Average Specific Self-Esteem (Social Confidence) and Location of Study

| MEETESTE        | Number of Cases | Mean   | SD    | SE of Mean |
|-----------------|-----------------|--------|-------|------------|
| Graduates       |                 |        |       |            |
| Locally trained | 56              | 3.1630 | 0.486 | .039       |
| Foreign trained | 224             | 3.0810 | 0.152 | .035       |

Mean Difference = .0820

Levene's Test for Equality of Variances: F = .960 P = .326

| t-test for Equality of Means |         |     |            |            | 95%          |
|------------------------------|---------|-----|------------|------------|--------------|
| Variances                    | t-value | df  | 2-Tail Sig | SE of diff | CI for diff  |
| Equal                        | 1.55    | 378 | .123       | .053       | (-.022,.186) |

A maximum score of 5 represent a high level of social confidence when meeting with people especially new people whereas 1 demonstrated the reverse.

The t-test carried out indicated there was no significant difference in the score of this specific self-esteem among the two cohorts of graduates.

#### Perceived Ability in English Proficiency

Self rated proficiencies in different aspects of English usage for academic purposes (PROFACA), different aspects of English usage for general or job purposes (PROJOB) and combination of the two (PROFALL) were compared between the two cohorts. See Table 5.25, 5.26 and 5.27.

Table 5.25 A Comparison of PROFACA and Location of Study

| PROFACA         | Number of Cases | Mean   | SD   | SE of Mean |
|-----------------|-----------------|--------|------|------------|
| Graduates       |                 |        |      |            |
| Locally trained | 135             | 3.1105 | .707 | .061       |
| Foreign trained | 207             | 3.5085 | .511 | .036       |

Mean Difference = -.3980

Levene's Test for Equality of Variances: F =9.671 P = .002

| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| Unequal                      | -5.65   | 223.93 | .0005      | .070       | (-.537,-.259) |

As expected, foreign trained graduates scored higher proficiency with a mean of 3.51 versus a mean of 3.11 scored by locally trained graduates. The t-test administered indicated that the scores are significantly different at 0.05 (0.002).

Table 5.26 compared self-rated proficiency in different usage of English for performing current job (PROFJOB). As expected foreign trained graduates scored higher proficiency and the different in score is statistically significant at 0.05 (0.0005).

Table 5.26 A Comparison of PROFJOB and Location of Study

| PROFJOB \ Graudates | Number of Cases | Mean   | SD   | SE of Mean |
|---------------------|-----------------|--------|------|------------|
| Locally trained     | 149             | 3.2785 | .793 | .065       |
| Foreign trained     | 210             | 3.7851 | .573 | .040       |

Mean Difference = -.5060

Levene's Test for Equality of Variances: F = 11.007 P = .001

| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| Unequal                      | -6.60   | 253.35 | .0005      | .076       | (-.656,-.357) |

Table 5.27 compared overall English perceived proficiency between the two cohorts of graduates and as expected foreign trained graduates again performed better than the locally trained graduates. (A mean of 3.62 vs 3.19, is significantly at 0.05 (0.0005)).

Table 5.27 A Comparison of Overall Perceived English Proficiency (PROFALL) and Location of Study

| PROFALL \ Graduates | Number of Cases | Mean   | SD   | SE of Mean |
|---------------------|-----------------|--------|------|------------|
| Local trained       | 130             | 3.1673 | .709 | .062       |
| Foreign trained     | 200             | 3.6185 | .500 | .035       |

Mean Difference = -.4512

Levene's Test for Equality of Variances: F = 12.925 P = .0005



| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| Equal                        | -6.30   | 211.53 | .0005      | .072       | (-.573,-.310) |

The respondents as indicated by Table 5.28 reported the following means of importance to success (max = 5.0).

Among the factors of academic English proficiency, respondents rated item (6), the ability in writing reports and papers as the most important (mean = 4.46) whereas item (12) concerning knowledge of cultural aspects of English language was given the lowest rating i.e., 3.45. Among aspects of using English to perform current jobs, the respondents rated item (19), "conduct personal and business correspondence" as most important (mean = 4.39). Item (17) "Eat and drink in public places" was given the lowest rating (mean = 3.68).

The rating of importance of various factors of English proficiency seem logical, for example, the highest ranking given for ability to write papers and reports is understandable because it is useful for academic success in any discipline. Since a majority of the graduates are of non arts majors and especially non-English major, it is logically for them to rate as "least important" the knowledge of culture in the English language. Similarly graduates seem to agree that the ability to conduct personal and business correspondence as the most important factor. It is also understandable that the ability to communicate in English for purpose of eating and drinking rated as least important" bearing in mind that people in Malaysia use Bahasa Malaysia for ordinary communication.

Table 5.28 Means of Importance to Success of Various Aspects of English Proficiency

| Academic English Proficiency                                      |  | Mean | No. of Cases |
|---|--|------|--------------|
| 1.  | Basic English proficiency (e.g. vocabulary, grammar)   | 4.39 | 376          |
| 2.  | Field-specific English skills (i.e., language in one's field)  | 4.24 | 371          |
| 3.  | Listening comprehension (e.g. in lectures and discussion)  | 4.43 | 375          |
| 4.  | Speaking ability (e.g., class discussion and presentation)   | 4.42 | 375          |
| 5.  | Reading comprehension (e.g., text, journal articles)   | 4.44 | 373          |
| 6.  | Writing ability (e.g., reports and papers)   | 4.46 | 373          |
| 7.  | Reading speed  | 3.90 | 371          |
| 8.  | Writing under time pressure  | 3.99 | 367          |
| 9.  | Field-specific writing conventions and scientific styles   | 3.84 | 366          |
| 10.   | Communication skills with professors and fellow students   | 4.20 | 371          |
| 11.   | Note taking skills   | 4.24 | 369          |
| 12.   | Knowledge of cultural aspects of English language  | 3.45 | 369          |
| General English Proficiency, using English to perform current job |  |      |              |
| 13.   | Take part in social interaction (e.g. conduct polite conversation, give opinions on general subjects)                        | 4.32 | 370          |
| 14.   | Travel and visit places of interest (e.g., ask for directions to a location, book tickets and ask for information)           | 4.04 | 372          |
| 15.   | Shop and use services (e.g., discuss services of goods required, make spoken or written complaints)                          | 3.91 | 371          |
| 16.   | Obtain medical attention and health services (e.g., explain symptoms of illness or injury, read medical forms and documents) | 3.79 | 369          |
| 17.   | Eat and drink in public places (e.g, read menu, read orders)   | 3.68 | 371          |
| 18.   | Use media for entertainment and information (e.g. TV, radio)   | 4.00 | 370          |
| 19.   | Conduct personal and business correspondence (e.g., write personal and business letters, resume)                             | 4.39 | 372          |
| 20.   | Deal with officials (e.g., read forms and instructions, argue or explain cases face-to-face)                                 |      |              |

From these measures of importance, graduates were compared for the indirect measures as proposed by Borich (1980), i.e., NEEDACA, NEEDJOB and NEEDPROF which described the need for upgrading to certain level of proficiencies to handle various usages of English in the academic field and career or a combination of the two.

Table 5.29, Table 5.30 and Table 5.31 compare the score of the two cohorts of graduates for the variables NEEDACA, NEEDJOB and NEEDPROF.

Table 5.29 A Comparison of NEEDACA by Location of Study

| NEEDACA         | Number of Cases | Mean   | SD    | SE of Mean |
|-----------------|-----------------|--------|-------|------------|
| Graduates       |                 |        |       |            |
| Local trained   | 130             | 4.0836 | 3.554 | .313       |
| Foreign trained | 205             | 3.0067 | 2.564 | .179       |

Mean Difference = 1.0769

Levene's Test for Equality of Variances: F = 16.028 P = .0005

| t-test for Equality of Means |         |        |            |            | 95%          |
|------------------------------|---------|--------|------------|------------|--------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff  |
| Unequal                      | 2.99    | 213.08 | .003       | .360       | (.367,1.787) |



Table 5.30 A Comparison of NEEDJOB by Location of Study

| NEEDJOB \ Graduates | Number of Cases | Mean   | SD    | SE of Mean |
|---------------------|-----------------|--------|-------|------------|
| Locally trained     | 148             | 3.0706 | 3.711 | .305       |
| Foreign trained     | 210             | 1.3069 | 2.558 | .174       |

Mean Difference = 1.7638

Levene's Test for Equality of Variances: F = 19.571 P = .0005

| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| unequal                      | 5.02    | 240.06 | .0005      | .351       | (1.072,2.455) |

Table 5.31 A Comparison of NEEDPROF by Location of Study

| NEEDPROF \ Graduates | Number of Cases | Mean   | SD    | SE of Mean |
|----------------------|-----------------|--------|-------|------------|
| Locally trained      | 126             | 3.6578 | 3.478 | .310       |
| Foreign trained      | 199             | 2.3493 | 2.333 | .165       |

Mean Difference = 1.3085

Levene's Test for Equality of Variances: F = 21.123 P = .0005



| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| Unequal                      | 3.73    | 196.27 | .0005      | .351       | (.616, 2.001) |

Table 5.29, Table 5.30 and Table 5.31 indicated that foreign trained graduates were in a better position as far as their need to upgrade their English proficiency to handle either academic or career demands when compared to locally trained graduates. t-test administered indicated that the differences are significant at 0.05.

### **Characteristics About Work or Job**

Factors relating to graduates background may not explain all the differences either in income level or job satisfaction. The job factors may have some contribution in explaining the differences in the employment outcomes. In this section graduates were compared in terms of (i) duration in permanent job, (ii) place of employment: public or private organisation, (iii) organisation ownership: foreign or local employers, (iv) job fit indeed.

#### **(i) Duration in Permanent Jobs**

Table 5.32(a) compares the duration of permanent job by location of study. Logically it would be expected that income level would be more, the longer one has experience in a job or various jobs, provided all other things remain equal.

Table 5.32(a) A Comparison of Duration in Permanent Job by Location of Study

| Dura's in permanent job | Number of Cases | Mean    | SD     | SE of Mean |
|-------------------------|-----------------|---------|--------|------------|
| Graduates               |                 |         |        |            |
| Locally trained         | 130             | 22.6923 | 11.055 | .970       |
| Foreign trained         | 139             | 20.1128 | 8.915  | .638       |

Mean Difference =2.5795

Levene's Test for Equality of Variances: F = 4.564 P = .033

| t-test for Equality of Means |         |        |            |            | 95%           |
|------------------------------|---------|--------|------------|------------|---------------|
| Variances                    | t-value | df     | 2-Tail Sig | SE of diff | CI for diff   |
| unequal                      | 2.22    | 253.65 | .027       | 1.161      | (.292, 4.867) |

Locally trained graduates have longer working experiences compared to foreign trained graduates (22.69 vs 20.11 months), the difference is significant at 0.05.

Table 5.32(a) indicated that the standard deviations of duration of employment for both cohorts are large. To investigate the large variation of duration of employment, a comparison of year of graduation was performed and the result is shown in Table 5.32(b).

Table 5.32(b) A comparison of Year of Graduation by Location of Study

| Year of Graduation<br>Graduates | Year of Graduation |      |     |      |     |      |     |      | Total |      |
|---------------------------------|--------------------|------|-----|------|-----|------|-----|------|-------|------|
|                                 | 89                 |      | 90  |      | 91  |      | 92  |      | No.   | %    |
|                                 | No.                | %    | No. | %    | No. | %    | No. | %    |       |      |
| Locally trained                 | 33                 | 22.4 | 43  | 29.3 | 55  | 37.4 | 16  | 10.9 | 147   | 40.1 |
| Foreign trained                 | 21                 | 9.5  | 86  | 39.1 | 106 | 48.2 | 7   | 3.2  | 220   | 59.9 |
| Total                           | 54                 | 14.7 | 129 | 35.1 | 161 | 43.9 | 23  | 6.3  | 367   | 100  |

Table 5.32(b) showed that as many as 14.7% of the graduates completed their studies in 1989 which consequently became the group that potentially had the longest duration of employment. Twenty three (6.3%) graduates who reported completing their study in 1992, were most likely to graduate in months of May to August which, by the survey time in November to December 1992 only completed if any, a very short duration of employment. The rest of the graduates completed their studies either 1990 or 1991. We could conclude from the above findings, the strong possibility of getting a substantial variation in duration of employment and hence resulted in high standard deviation as shown in Table 5.32(a). Chi-square test performed to compare the year of graduation between the two cohorts produce  $\chi^2 = 23.06$  with 3 d.f. which is significant. This implied that different proportion of students from the two cohorts graduated in the years between 1989 to 1992.

## Job Sectors of Current Jobs

The types or organisation the graduate were employed at were reclassified into either public or private sectors. Public sectors includes the following organisation, i.e., Federal government, state government and local government. Private sectors includes government-controlled corporation, private corporation, private partnership, private single proprietorship and own businesses.

Table 5.33 compare the job sectors the graduate being employed by college origins.

Table 5.33 : A Comparison of Employment Sector by Location of Study

|                | Locally trained graduates |       | Foreign Trained graduates |       | Total |       |
|----------------|---------------------------|-------|---------------------------|-------|-------|-------|
|                | No.                       | Col.% | No.                       | Col.% | No.   | Col.% |
| Public sector  | 49                        | 33    | 33                        | 16    | 82    | 23    |
| Private sector | 100                       | 67    | 173                       | 84    | 273   | 77    |
| Total          | 149                       | 100%  | 206                       | 100%  | 355   | 100%  |

The above table indicates that a higher percentage of foreign trained graduates are employed in the private sector, i.e., 84% versus only 67% of the locally trained graduates. However the percentage of locally trained graduates employed in the public sector is twice the amount when compared to the foreign trained graduates (i.e., 33% vs 16%).



To determine whether significant differences exist between types of employment sectors by the two groups of graduates, a chi-square test was carried out. A chi-square = 13.84 with 1 df indicates a level of significance of 0.05 (0.0002). See page 172 to 173 for discussion.

### Organisation's Ownership

Graduates were requested to furnish information on whether they were working in corporations which are locally owned or corporations that have foreign participation. Table 5.34 compares type of organisations (ownership) by location of study.

Table 5.34 A Comparison of Types of Organisation  
(ownership) by Location of Study

| Organisation Ownership                 | Locally Trained graduates |       | Foreign Trained graduates |       | Total |       |
|--|---------------------------|-------|---------------------------|-------|-------|-------|
|  | No.                       | Col.% | No.                       | Col.% | No.   | Col.% |
| Corporation with foreign participation | 28                        | 19    | 69                        | 34    | 97    | 27    |
| Local Corporation                      | 121                       | 81    | 136                       | 66    | 257   | 73    |
| Total                                  | 149                       | 100   | 205                       | 100   | 354   | 100   |

A total of 27% or 97% out 354 of graduates were employed in corporations that have foreign participation. Among the locally trained graduates, 19% were employed in the corporation that have foreign

participation. Among the foreign trained graduates this percentage is higher i.e., 34%.

To see whether any significant differences in terms of the number of the two cohorts working in corporations with foreign participation, a chi-square test was carried out. A chi-square = 9.58 with 1 df was obtained giving a level of significant of 0.0019.

### Job Fit Index

Job fit index measure the fitness between the undergraduate study and their current full time job in term of status, skill utilization and relationship to major of study.

Table 5.35 compare the job fit index and location of study.

Table 5.35 A Comparison of Job Fit Index by Location of Study

| JOB FIT INDEX   | Number of Cases | Mean | SD    | SE of Mean |
|-----------------|-----------------|------|-------|------------|
| Graduates       |                 |      |       |            |
| Locally trained | 137             | 8.16 | 1.686 | 0.144      |
| Foreign trained | 196             | 7.91 | 1.648 | .118       |

Mean Difference =.2473

Levene's Test for Equality of Variances: F = .010 P = .921

| t-test for Equality of Means |         |     |            |             | 95%          |
|------------------------------|---------|-----|------------|-------------|--------------|
| Variances                    | t-value | df  | 2-Tail Sig | SE of diff. | CI for diff  |
| equal                        | 1.34    | 331 | .183       | .185        | (-.117,.612) |

Out of a possible maximum score of 10, the graduates scored 8.17 and 7.91 respectively indicating quite a good fit between what they have studied to the current employment. However there was no significant difference in the score of job fit index among the two cohorts of graduates.

#### Dependent Variables

The dependent variables of "income level" and "job satisfaction" were compared between two cohorts of graduates. Table 5.36 and Table 5.37 indicated the comparison of the above dependent variables.

Table 5.36 A Comparison of Level of Income in Ringgit Malaysia by Location of Studies

| Income level    | Number of Cases | Mean     | SD      | SE of Mean |
|-----------------|-----------------|----------|---------|------------|
| Graduates       |                 |          |         |            |
| Locally trained | 148             | 18109.05 | 4886.34 | 401.65     |
| Foreign trained | 204             | 19459.32 | 5331.25 | 373.26     |

Mean Difference = 1350.26

Levene's Test for Equality of Variances: F = 3.74 P = 0.054

| t-test for Equality of Means |         |     |            |            | 95%              |
|------------------------------|---------|-----|------------|------------|------------------|
| Variiances                   | t-value | df  | 2-Tail Sig | SE of diff | CI for diff      |
| equal                        | 2.43    | 350 | 0.016      | 555.97     | (256.55,2443.98) |

Foreign trained graduate earned an average of Ringgit Malaysia (RM) 19459.32 per year which is higher than the average income of locally trained graduates (RM18109.05). The difference of income is significant at 0.05. (Note: £1≈ RM4).

### Job Satisfaction

Table 5.37 A Comparison of Level of Job Satisfaction by Location of Study

| JOB SATISFACTION | Number of Cases | Mean | SD   | SE of Mean |
|------------------|-----------------|------|------|------------|
| Graduates        |                 |      |      |            |
| Locally trained  | 130             | 4.24 | .796 | .070       |
| Foreign trained  | 193             | 4.21 | .775 | .056       |

Mean Difference = .0275

Levene's Test for Equality of Variances: F = .05 P = .824

| t-test for Equality of Means |         |     |            |            | 95%          |
|------------------------------|---------|-----|------------|------------|--------------|
| Variiances                   | t-value | df  | 2-Tail Sig | SE of diff | CI for diff  |
| equal                        | .31     | 321 | .758       | .089       | (-.148,.202) |



Level of job satisfaction is almost similar or there was no significant difference in job satisfaction between the two groups.

A score of 4 out of a possible six may be interpreted as being just satisfied with the current employment.

## **5.2 SUMMARY**

Before we could summarised the findings it is appropriate to be cautious with the results when 0.05 level of significant were used. Statistically, for every twenty comparison made we could end up in accepting one conclusion by chance. However the author has the opinion that for this research in spite of 37 comparisons were made, it was not likely we had accepted any conclusion by chance since on examing the actual level of significanes of each comparison, they were very much lower than 0.05.

This section summarised the profile of the two cohorts of graduates based on the analysis carried on the sample selected.

### **Between College Effects:**

#### **1. College Origin or Location of Study:**

A random sample of locally trained graduates was chosen from various institutions i.e., from University Malaya, University of Technology, Islamic International University and MARA Institute of

Technology to reflect graduates similar majors to those of foreign trained graduates.

Almost 73% of the respondents who studied in universities in the United States did so in top 450 colleges. This congruent with the government's policy of sending students only to accredited schools which are ranked from competitive to higher competitive [Malaya House, 1990]. It appears that the government was successful in its effort to place government scholars in the appropriate top institutions.

The United Kingdom trained graduates studied in equal proportion in universities and polytechnics (since 1992 all polytechnics in U.K. were converted and called universities).

### **Within College Effects:**

Characteristics concerning academic experiences and attainment are now summarised:

#### **2. Undergraduates Majors of Studies:**

There was no significant difference in broad majors of study taken by two groups of students. A majority of the graduates (almost 48%) completed hard-applied majors, followed by soft-applied majors (40%). Population and sample of the locally trained graduates were chosen in similar major and proportion to ensure the valid-

ity of comparison. The proportion of respondents who responded to the survey from the view point of majors are proportionate to the population frame, adding to the validity of the sample.

3. Duration to Complete Degree Courses:

On average, foreign trained graduates took shorter time (60.6 months) than the locally trained graduates (68.6 months) to complete their university degrees.

4. University Grades:

There was no significant differences in academic achievement as measured by the Cumulative Grade Point Average (CGPA) between two groups of graduates. However on average foreign trained graduates scored slightly higher CGPA (2.82) as compared to only 2.71 among the locally trained graduates.

5. Extra-curricular Activities:

Foreign trained graduates are more active in extra-curricular activities than the locally trained students.

6. Satisfaction with University's Services:

On average the two cohorts do not differ significantly in their reports about satisfaction with university facilities. In brief, foreign

trained graduates rated themselves as more satisfied (although not significant) with quality of instruction, academic advising and career guidance and counseling when compared to locally trained graduates. As expected, however, locally trained graduates rated themselves as more satisfied in job placement services.

7 Effort in Mastering Academic Subjects:

There was no significant difference in the level of own effort to master academic subjects by the two cohorts of graduates.

8. College Preparation

The level of variable college preparation which combine satisfaction with university services and own effort in mastering academic subject between two groups is not significantly different.

### **Conditional College Effects**

Characteristics that was broadly classified as conditional effects to education outcomes are now summarised:

9. Gender:

A comparison of gender shows a ratio of two to one of male to female for the whole sample, with a slightly higher proportion of males among the locally trained graduates, but the differences between the two groups are not significant.



10. Age:

The foreign trained graduates have a mean age of 24.7 years which is younger than the average age of locally trained graduates which is 26.3 years.

11. Fathers' Education:

The mode for the level of education for both fathers of the graduates is some primary education. However, on average, fathers of foreign trained graduates have a slightly higher educational level than the fathers of locally trained graduates.

On average the fathers of foreign trained graduate could be interpreted to complete between "three years to five years of secondary education". Similarly fathers of locally trained graduates could be interpreted to complete between "primary education" and "three years of secondary education".

12. Mothers' Education:

The mode for both groups of mothers was attending "some primary education". Again on average the mothers of foreign trained graduates had undergone a slightly higher education level (between some primary school and three years of secondary education) compared to mothers of locally trained graduates who, on average, completed at the level between "some village (informal)

religious school" and "some primary school".

It was interesting to note that not a single mother of the respondents had a university degree.

13. Family Income:

In general the family of foreign trained graduates earned more income (mode Malaysia Ringgit 7201 - 12,000) per year compared to the income of the family of locally trained graduates (mode Malaysia Ringgit 0 - 4500) per year.

14. Socio-economic Status:

Parents of foreign trained graduates have higher economic status than the parents of locally trained graduates.

15. Types of High School Attended:

Using the classification that high school is divided into two groups, i.e., "good school" and "average school", the result of the analysis indicated that more of foreign trained graduates attended good schools compared to the locally trained.

16. High School (SPM) Grades:

Foreign trained graduates have better SPM (equivalent to O level)

grades compared to the locally trained grades. These results are also reflected in the results of the total aggregate of best five subjects in their SPM examination.

Furthermore, in looking at one particular subject in that examination i.e., English communication, foreign trained graduates scored better grades compared to the grades achieved by locally trained graduates.

17. Perceived English Proficiency:

Foreign trained graduates rated themselves higher than the locally trained graduates in the following measures of English proficiency:

- (i) PROFACA: proficiency in different usages of English for academic purposes.
- (ii) PROFJOB: proficiency in different usage of English for general or job purposes.
- (iii) PROFALL: proficiency in the above combination of the two situation of academic and job environment.

This is very much expected since foreign trained graduates had to deal only with English either academically or for general purposes when they were overseas.

18. Need for Further English Proficiency:

In order to cope with the different degrees of importance of English usage either in academic or work function or the combination of the two, foreign trained graduates rated their need for further proficiency as very much less than the locally trained graduates. The difference in need is very apparent in the job situation where it could be interpreted that the foreign trained graduate rated themselves little in need for further proficiency or they were proficient enough in their mastering English for their work environment.

19. Global Self esteem:

Foreign trained graduates recorded a higher level of self esteem when compared to locally trained graduates.

20. Specific Self esteem - Social Confidence:

There was no significant difference in the perceived social interaction confidence among the two cohorts of graduates.



## Job Related Effects:

Characteristics about work or job are now summarised:

### 21. Duration in Permanent Jobs:

Foreign trained graduates have a shorter working experience in the permanent job compared to the locally trained graduates, the difference is significant.

### 22. Employment Sector:

Most graduates (77%) were working in the private sector. Out of 82 graduates who were working in the public sector 60% of them were trained locally and the other 40% were trained in foreign institutions.

### 23. Organisations' Ownership:

Most of the graduates, (73%) work with local corporation. However those who were working in the corporations with foreign participation, most of them (71%) were among the foreign trained graduates. --

### 24. Job Fit Index:

There is no significant difference in the level of job fit index between the two groups of graduates.

## **Dependent Variables:**

### 1. Income Level:

Foreign trained graduates earn slightly higher annual income when compared to locally trained graduates.

### 2. Job Satisfaction:

No significant difference in job satisfaction between the two groups of graduates was recorded.

It could be further summarised that the two cohorts have some similarities and differences. There were no significant differences between the two cohorts in the following characteristics: gender, major of studies, university grades, satisfaction with university, effort in mastering academic subjects, college preparation, specific self esteem, job fit index and job satisfaction.

However the foreign trained graduates when compared to locally trained graduates were slightly younger, have a background of higher socio-economic status, attended better schools and earned better high school grades. It took them shorter period to complete their degrees, more active in extra-curricular activities and more proficient in English. In the work environment they had shorter working experience and they were most likely to work in the private sector especially in the corporation with foreign participation.

### 5.3 DISCUSSION ON RESEARCH FINDING (1)

In term of public expenditure it is a lot more expensive to send students abroad (see Table 1.01, Chapter 1). To justify the premium cost, the government must ensure a high rate of academic success among the students sent abroad. This could be seen from the characteristics of graduates which indicated that foreign trained graduates on attending better high schools and earned better high school grades. Foreign trained graduates scored better SPM grades, and better in the score of English paper at the same examination. At the same time the fact that foreign trained graduates are also of higher socio-economic status is in favour with the hypothesis that attending a selective or prestigious colleges (overseas institution in this research) in part of a process of cumulative advantage. "Not only are students from advantaged socio-economic background more likely than individuals from less advantaged social origins to attend elite undergraduates institutions (for example, Hearn 1984, Karabel & Astin, 1975) but the former may be more likely to convert the status conferred by such institution into greater economic success (Karabel & Mc Clelland, 1987)" [Pascarella, Terenzi, 1991].

One of the objective of Government's National Economic Policy (NEP) is to eradicate poverty and to address the economic imbalance among the races. Among the mechanism used is to upgrade educational level of Bumiputra through a generous scholarship programmes. It is inevitable that selection of students to be sent abroad which was based on merit was at the expense of the ideals of the above objective. It is apparent from the study, that the scholarships awarded, are



in favour to Bumiputera of slightly higher socio-economic status. In agreement with the previous work (Mehmet, Yip, 1986), the distribution of scholarships are regressive, being biased in favour of the higher income group.

However, the policy is successful, in general, to promote social mobility among the Bumiputera. The parent of foreign trained graduates earn a mode of income between RM7201 to RM13,000 and only 30% of them earn more than RM18,000 per year. Among the parent of locally trained graduates, the mode of annual income is between 0 to RM4500 and only 15% of them earn more than RM18,000 per year. This speaks well for social mobility when we compare the average income of foreign trained and locally trained graduates are RM19,459 & RM18,109 respectively. The research figure in term of parent's educational level is more impressive when compared to studies made in US that suggest having a college educational provides a net advantage to one's sons or daughter in terms of increased educational attainment and to somewhat lesser extent, of occupational status [Pascarella & Terenzini, 1991]. In spite of slightly better educational level among the parents of foreign trained graduate, both parents of the two cohorts and their graduate children belonged to two different worlds, "academically speaking" (Mehmet, Yip 1968). Thus, no less than 72.8% and 57.5% of local and foreign graduates' fathers respectively had no more than primary education, while only 1.9% and 4.8% of graduates' fathers respectively hold university degrees. No less than 79.5% and 69.7% of local and foreign graduates mothers respectively had no more than primary education and not a single mother of graduates surveyed hold university degree.



Normally, past studies indicated that there is a positive and strong correlation between parental education attainment and access to university [Mehmet, Yip 1986]. Pascarella, Terenzi, 1991 reported similar finding even though the intergenerational impact of parental secondary education on career attainment of sons and daughter was indirect.

The findings indicated that the foreign trained graduates are slightly younger than locally trained graduates. Besides they also concluded their degree courses in slightly shorter time. Both related characteristics could be explained by the fact that most of the undergraduate course in Malaysia have a duration of six years after SPM (equivalent to O Level) examination. This is in contrast with the system in USA and UK where most of the undergraduate course have a duration of four to five years after SPM examination. (Bumiputera students needs about six more months to fulfil the English requirement to enter USA and UK institutions). Study made by Mehmet and Yip 1968 indicated that a relatively high percentage of Malaysian students enter local universities with some break after completing school education. From the findings, in spite of being 1.5 years younger, foreign trained graduates do not seem to be at a disadvantage position as far as yearly income and job satisfaction were concerned.

Another striking difference between the two cohorts is that the foreign trained graduates seem to be a lot more active in the extracurricular activities. Among some of the reasons that may explain this phenomenon is the need for foreign trained graduates to be involved in some activities. Due to the distances from home and family, gradua-

tes were quoted to be active with activities that involved fellow Malaysian students. Some of them were also busy over the semester breaks with part-time jobs, which in some cases were necessary to complement the just sufficient scholarships allowances awarded to them. On the other hand locally trained graduates seem to have the comfort of home and be able to spend time with families over the semester breaks.

As the result of students riots in 1973/74 Malaysian government introduced University Act 1974 which very much curtailed the extracurricular activities of the students. This Act was not meant to curtail healthy activities. However the elaborate administrative procedures required before any activity was allowed, have discouraged students or in some cases was given as an excuse not to participate in extracurricular activities.

The different characteristic between the two cohorts in extracurricular activities, may not have the direct-impact on the occupational choice or occupational attainment, at least, if we take past study in USA as an indication. Weidman (1984), after controlling such factors as freshman career choice, family socio-economic status, race, college selectivity and college grades, found that the extent of involvement in extracurricular activities (for example, student government, college organisation) generally had trivial and statistically non significant direct effect on status of early career choice.

Smart's (1986) work on a similar study indicated that the variable social integration (which includes extracurricular activities) reported a non

significant direct impact on occupational status. However, Pascarella, Terenzi, 1991, who summarised a specific body of research indicated that working during college, particularly in a job related to one's major or initial career aspirations, has a positive net impact on career choice, career attainment, and level of professional responsibility attained early in one's career.

Among the various psychological development on attending colleges reported in the past study [Pascarella, Terenzi 1991) the following outcomes showed a positive effect: identity status, ego development, self concepts, self esteem, anatomy, independence and locus of control, intellectual orientation, interpersonal relations, personal adjustment and psychological well being. The graduates were also reported to be less authoritarian and more tolerance toward people of various ethnicity.

This study only concentrated on one aspect of psychological development namely the self-esteem. Foreign trained graduates were found to rate themselves higher in self esteem as compared to locally trained graduates. Many factors may contributed to this high rating including socio-economic status, ability and current achievement. These factor, may need to be explored further; however on the surface we may conclude the fact that the graduates have undergone a very vigorous academic programmes in totally foreign environment may speak well for their strong opinion about their self i.e. their self esteem. The finding is even more significant since the foreign trained graduates were slightly younger, which led to a conclusion that higher self esteem is acquired rather than developed through age.



The study reported perceived higher ability among the foreign trained graduates in English proficiency either in academic work or the purpose of performing current jobs. The finding is of no surprise since the medium of instruction of the colleges these graduates attended was English. The study will be interested to establish whether the proficiency in English may have the direct impact to the career choice and employment attainment. This particular aspect of the study will be further explored in the discussion of Research findings(2).

The finding that most graduates (77%) worked in the private sector led to many interpretations. The privatisation of public department and agencies by the government since 1983 resulted in the creation of a lot more jobs in the private sector. At the same time the private sector offers better salary and benefits and hence attracted more graduates.

The findings also support the success of the social engineering of the nation which try to eliminate the identification of race by employment sector. It is apparent from the finding that more Bumiputera graduates are opting for private sector employment. What is interesting to note is that among those who were working in the private sector, a bigger percentage of them were trained in the foreign institutions. Furthermore, those who worked with organisations with foreign participation, a bigger percentage of them is among the foreign trained graduates. This finding raises the old debate of "human capital" explanation or the belief in "screening or certification" function of universities.



The "human capital" explanation believes that colleges by means of a series of curricular and extracurricular experiences, impart cognitive skills, values, personality characteristics, attitudes and behaviour pattern that are valued by employers in high status occupation [Pascarella, & Terenzi 1991].

The screening or certification explanation proposes that a college degree generally certifies the holder as acceptable material for a middle-class occupation or position [Jenk & Riesman, 1968]. Based on the superiority of some cognitive skills like proficiency in English and superiority in the personal characteristics like self esteem among foreign trained graduates, together with the perception of Malaysian society that value "paper qualification", the author believes that both interpretation are applicable in explaining the premium given to foreign trained graduates.

This research finding is in agreement with the work by Kiong, 1982 which reported, on surveying a group of public and private employers, premium was placed on foreign degrees by the competitive private sector. It also reported that premium was not found in the public sector where earnings follow a predetermined scale (no differentiation between foreign or local degrees).

Finally Table 5.38 indicated that foreign trained graduates earn 7% more than locally trained graduates. The finding is substantial since on average they had a shorter working experience by 2.5 months compared to locally trained graduates. In the competitive private sector they earn 7.5% more than the local graduates. However in the public sector

locally trained graduates earn 6.75% more than foreign trained graduates, although the literature review and the discussion so far were predicting the differences, it is yet to be seen whether this differences were solely due to the effect of between colleges i.e., between local versus foreign institutions. Research findings (2) will help us to identify factors may it be between college, within college effects or conditional college effects that singly or together explaining the difference in income of graduates and their job satisfaction.

Table 5.38 A Comparison of Yearly Income (In Ringgit Malaysia) by Sector of Employment and Location of Study.

| Yearly Income<br>Graduates   | Public Sector |     | Private Sector |     | Total     |     |
|------------------------------|---------------|-----|----------------|-----|-----------|-----|
|                              | Amount        | No. | Amount         | No. | Amount    | No  |
| 1. Foreign trained graduates | 15,778.51     | 32  | 19,456.66      | 171 | 19,456.66 | 203 |
| 2. Locally trained graduates | 16,843.75     | 49  | 18,735.31      | 99  | 18,109.50 | 148 |
| 3. Total of (all graduates)  | 16,422.91     | 81  | 19,628.09      | 270 | 18,888.43 | 535 |

#### **5.4 DISCUSSION OF POLICY IMPLICATION OF RESEARCH FINDINGS (1)**

The graduates surveyed generally came from families who were lowly educated, this being true for both father and mother. "Majority" of the family were poor, where 20.7% of them earn less than RM375 per month (RM4500 per year) i.e., the threshold of poverty as defined by the government (Malaysia, 1991).

The scholarships policy of sending a big number of students abroad and maintaining heavily subsidised local institutions have contributed tremendously to the intergenerational social mobility. However in term of accessibility to scholarships to study abroad, the finding indicated that it is slightly regressive, benefitting slightly more well-to-do families. As mentioned earlier the policy is unavoidable, due to the requirement of sending academically better students to guarantee a higher success rate. Here the policy has to be decided whether to reward the achievers (high school achievers) or to ensure that the scholarships policy is not used to propagate the well being of already well-off families.

Foreign trained graduates were slightly younger and yet seem not to be at a disadvantage position as far as job attainment is concern. The findings could be used to justify the need to shorten the periods of degree courses offered in Malaysian universities. Proposal that will reduce training period and increasing the "production rate" of graduates would be appropriate in view of the shortages of graduates especially in technical field [Malaysia, 1991]. However, the modification or review of the curriculum must not be at the expense of the quality.



At least, the curriculum must fulfill the expectation of employers, either public or private sector. Kiong, (1986) identified four roles of university from the perspective of Malaysian employers. The four roles in order of importance were: developing the ability to think rationally and systematically, creating awareness of and sensitivity to social needs and problems, imparting general skills and finally imparting specific skills. His findings lends considerable support to Blaug's (1985, p.19) argument that "... even at the level of professional studies, the cognitive knowledge which is said to be indispensable frequently consists of perfectly general communication skills and problem solving abilities rather than occupation - specific competences..." If these roles could be played by the universities in the shorter period, more responsibilities should be played by the employers in their in-house training to impart specific skills.

University Act 1974 which was introduced to curb students demonstration in Malaysian universities was seen to be irrelevant in the late 90's. Lack of interest among the students to be involved in extracurricular activities was cited to be one of the repercussions of University Act 1974. The research findings that indicated the inactivity or lack of involvement among local graduates in extracurricular activities could lend the support for repealing the University Act 1974.

No policy implication could be derived from the findings that foreign trained graduates rated themselves higher in self esteem, compared to the locally trained graduates. The research did not identify the variables that might explain the differences in self esteem. Apart from vast experiences the foreign trained graduate have under-



gone overseas, the family background and job experiences may also influence the differences in self esteem. The findings led to research implication in which further studies have to be carried out to isolate the variables that explain differences in self esteem.

Education has helped the social engineering effort in Malaysia to reduce the identification of race by nature of employment. The findings indicated that majority of Bumiputera graduates work in the private sector which was not common before 1970. (New Economic Policy which among other things addressed the economic imbalance between races and to eliminate identification of races by employment was introduced in 1970, soon after the communal riot in May 1969).

Among those who worked in the private sector, a bigger percentage were trained overseas. A premium was given to foreign trained graduates which led to the most plausible explanation that their qualifications are superior in quality relative to domestic degrees, or thought to be so by businessmen (screening hypothesis) who are supposedly knowledgeable in this area (Kiong, 1982)

A premium, could also be given due to overall superiority of foreign trained graduates in proficiency in English which is mainly the medium of communication in the private sector. These findings led to the following policy implication:

- (a) The need to study the impact University Act 1974 on students' participation in extra and co-curricular activities. Methods to encourage local graduates to participate in extra curricular activities have to be found and implemented.
- (b) A continuous improvement efforts in providing quality education by the local universities must be carried out.

In the next chapter, further analysis was carried out to find the correlation between the two dependent variables, income level and job satisfaction respectively with all the independent variables discussed in the literature review.

## CHAPTER VI

### RESEARCH FINDINGS (2)

#### 6.0 INTRODUCTION

The findings reported in the previous chapter describes and differentiates the characteristics of locally trained and foreign graduates. This was done in order to fulfil the first objective of this study which is to draw the profiles of the two cohorts and to relate these to their early employment outcomes.

Various measures and characteristics were used to gauge change and development which resulted from a college education. Among the variables used were learning and cognitive development, development in attitudes and values, psychosocial changes, moral development, socioeconomic outcomes and finally the quality of life indices (Pascarella & Terenzini, 1991). Socioeconomic outcomes which are considered relevant to this research were classified into various measures such as occupational status, stability of employment, career mobility and attainment, earning, and private rate of return. Earning or level of income was chosen to measure the economic outcome of college education, and for a more specific reason it was used to investigate the justification in spending a large sum of money for the students' overseas education. Apart from the economic aspect, it was decided that a qualitative measure of the quality of employment, i.e. job satisfaction would be an

appropriate measure used to address the issue of employment out-comes of the two cohorts. Thus, the two variables, level of income and job satisfaction respectively were used as dependent variables in this research.

Kiong (1982) compared the productivity of the two cohorts of Malaysian graduates (all races) and reported a premium of higher productivity for foreign trained graduates. Similar finding was reported by Rashid, M.Z.A and Sidin, S.M. (1996) in which the private sector gave preferences to foreign trained graduates. This study is to substantiate the previous works among the Bumiputera graduates. It intended to test all the hypothesis listed in Chapter III including the null hypothesis that foreign trained graduates should not achieve better early employment outcomes, at least from the point of view of level of income. A further investigation was carried out in order to decide whether the two cohorts have a relationship with another measure of employment outcome, i.e., job satisfaction. However, as reported in the previous chapter, the two cohorts did not demonstrate differences in job satisfaction when the measure was recorded in isolation.

This chapter attempts to relate some functional relationships and strengths of selected independent variables identified in the literature review in influencing the level of income and job satisfaction.



Through bivariate correlation, association between level of income and job satisfaction with some of the variables were established. However, the bivariate analysis was limited to associations of only two of the variable at a time. As such an analysis of relationship and interaction of several variables cannot be done simultaneously. One way of finding out relationships among variables is through a statistical techniques of multivariate regression analysis.

## 6.1 RELATIONS AMONG VARIABLES

This section examines the relationships between the independent variables and the dependent variables (level of income and job satisfaction) respectively. The independent variables were categorised into four categories: between college effects, within college effects, conditional college effects and job related effects.

Two rules were set in order to reject the null hypothesis and accept the research hypothesis. The first rule was that the relationship must be significant at  $p < 0.05$ . The second rule was that the correlation value must be 0.10 and above. The scale suggested by Davis (1971) was used to describe the relationships between the independent variables and the dependent variables, and it was suggested as follows:-

| <u>Coefficients</u> | <u>Description</u>       |
|---------------------|--------------------------|
| .70 or higher       | Very strong              |
| .50 to .699         | Substantial relationship |
| .30 to .499         | Moderate relationship    |
| .10 to .299         | Low relationship         |
| .01 to .099         | Negligible relationship  |

However, it is to be reminded that when samples are used, rejecting the null hypothesis only means that it is unlikely that the value of the correlation is zero in the population. For large sample sizes, even very small correlation coefficients have small observed significance levels. We can have a correlation coefficient 0.1 and have it be "statistically" significant. It indicates that there is a very small, but non zero, linear relationship between the variables. We should look at both the value of coefficient and its associated significance level when evaluating the relationship among variables.

## **6.2 RELATIONSHIP BETWEEN LEVEL OF INCOME AND BETWEEN COLLEGE EFFECTS.**

### **1. Location of Study (Local or Foreign Universities)**

The research hypothesis was stated in the null form. A low significant negative relationship existed between income level and location of study. Table 6.00 indicates  $r_{pb} = -0.1287$  and the relationship is significant. Therefore the null hypothesis was rejected and it follows that the research hypothesis was accepted.

## **6.3 RELATIONSHIP BETWEEN LEVEL OF INCOME AND WITHIN COLLEGE EFFECTSS**

### **2. Undergraduate Major of Study**

The research hypothesis was tested in its null form. A moderate significant positive relationship existed between income level

and major of study of respondents. Table 6.00 reports  $\text{Eta} = 0.3179$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

### 3. University Grades

The research hypothesis was tested in its null form. A low significant positive relationship existed between income level and university grades of respondents. Table 6.00 reports  $r = 0.1182$  and the relationships is significant at  $p < 0.05$  (0.029). The null hypothesis was rejected. Therefore, the research hypothesis was accepted. The test indicated that when taking college grade in isolation, higher income is associated with graduates with higher college grades.

### 4. Extracurricular Activities

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between income level and extracurricular activities of the respondents. Table 6.00 reports  $r = 0.0262$  and the relationship is not significant. Therefore the null hypothesis was not rejected and it follows that the hypothesis was not accepted.

### 5. Satisfaction With University's Facilities (SATISUNI)

The research hypothesis was tested in its null form. A negligible non significant positive relationship existed between income level and SATISUNI. Table 6.00 reports  $r = 0.0386$  and the relationship is not significant. Therefore the null hypothesis was not rejected and it follows that the research hypothesis was not accepted.



6. Effort in Mastering Academic Subjects

The research hypothesis was tested in its null form. A negligible non significant positive relationship existed between income level and respondent's effort in mastering academic subjects. Table 6.00 reports  $r = 0.0846$  and the relationship is not significant.

7. College Preparation (COLEGPREP)

The research hypothesis was stated in its null form. A negligible non- significant positive relationship existed between income level and COLEGPREP. Table 6.00 reports  $r = 0.0701$  and the relationship is not significant. Therefore the null hypothesis was not rejected and it follows that the research hypothesis was not accepted.

6.4 **RELATIONSHIP BETWEEN LEVEL OF INCOME AND CONDITIONAL COLLEGE EFFECTS.**

8. Gender

The research hypothesis was tested in its null form. A moderate significant negative relationship existed between income level and gender of respondents. Table 6.00 reports that the point biserial correlation coefficient value ( $r_{pb}$ ) was  $-0.3908$  and it was significant at  $p < 0.05$ . The null hypothesis was rejected. Therefore, the research hypothesis was accepted.



9. Age

The research hypothesis was tested in its null form. A low significant positive relationship existed between income level and age of respondents, Table 6.00 reports that  $r = 0.1344$  and the relationship is significant. The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

10. Parents' Socio-economic Status

The research hypothesis was stated in its null form. A negligible non significant positive relationship existed between income level and parents' socio-economic status of respondents. Table 6.00 indicated  $r = 0.1033$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was accepted.

11. Global Self-esteem

The research hypothesis was stated in its null form. A low significant positive relationship existed between income level and global self-esteem of respondents. Table 6.00 reports  $r = 0.2328$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

## 12. Specific Self-esteem (Social Confidence)

The research hypothesis was stated in its null form. A low significant positive relationship existed between income level and specific self-esteem of respondents. Table 6.00 reports  $r = 0.1179$  and the relationship is significant at  $p < 0.05$  (0.033). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

The relationship between English Proficiency variables and income level are presented in Table 6.00. The English proficiency variables include proficiency in academic English, Job related English proficiency overall proficiency, need for academic English proficiency, need for job related English proficiency and need for overall English proficiency.

## 13. Academic English Proficiency

The research hypothesis was stated in its null form. A negligible non-significant positive relationship existed between income level and academic English proficiency of respondents. Table 6.00 report  $r = 0.0955$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

## 14. Job Related English Proficiency

The research hypothesis was stated in its null form. A low significant positive relationship existed between income level and working English proficiency. Table 6.00 reports  $r = 0.1362$  and the relationship is significant at  $p < 0.05$  (0.013). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

15. Overall English Proficiency

The research hypothesis was stated in its null form. A low significant positive relationship existed between income level and overall English proficiency. Table 6.00 reports  $r = 0.1152$  and the relationship is significant at  $p < 0.05$  (0.044). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

16. Need for Academic English Proficiency

The research hypothesis was stated in its null form. A negligible non-significant negative relationship existed between income level and the need for academic English proficiency. Table 6.00 reports  $r = -0.0774$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

17. Need for Job Related English Proficiency

The research hypothesis was stated in its null form. A non-significant negative relationship existed between income level and the need for general/working English proficiency. Table 6.00 reports  $r = -0.0307$ , and the relationship is not significant. The null hypothesis was rejected. Therefore, the research hypothesis was not accepted.

18. Need for Overall English Proficiency

The research hypothesis was stated in its null form. A non-significant negative relationship existed between income level and the need for overall English proficiency. Table 6.00 reports  $r = -.0675$  and the relationship



for overall English proficiency. Table 6.00 reports  $r = -.0675$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

## **6.5 RELATIONSHIP BETWEEN INCOME LEVEL AND JOB-RELATED EFFECTS.**

The relationship between job related variables and income level is presented in Table 6.00. The job related variables include duration of employment, sector of employment, employer's ownership and job fit index.

### **19. Duration of Employment**

The research hypothesis was stated in its null form. a moderate significant positive relationship existed between income level and duration of employment of respondents. Table 6.00 reports  $r = 0.3087$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

### **20. Sector of Employment (Public or Private Sectors)**

The research hypothesis was stated in its null form. A low significant negative relationship existed between income level and types of sector of employment of respondents. Table 6.00 reports  $r_{bp} = -1.2605$  and the relationship is significant at  $p < 0.05$  (0.0005). the null hypothesis was rejected. Therefore, the research hypothesis was accepted.



## 21. Employer's Ownership (Foreign or Local Corporation)

The research hypothesis was tested in its null form. A low significant positive relationship existed between income level and types of employers (foreign or local). Table 6.00 reports  $r_{bp} = 0.2182$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

## 22. Job Fit Index

The research hypothesis was tested in its null form. A low significant positive relationship existed between income level and job fit index. Table 6.00 reports  $r = 0.1087$ . However, the relationship is not significant. The null hypothesis was not rejected. Therefore the research hypothesis was not accepted.

**Note:** As before, one has to be cautious when making conclusion on more than 20 decisions by using a level of significant of 0.05. Statistically we may accept or reject one out of 20 null hypothesis by chance if we use a level of significant of 0.05. However the author has the opinion, in this research it was not likely so, since in most cases the actual level if significant was very much lower than 0.05. Furthermore the decision to accept or reject the null hypothesis was done after making two steps decision; i.e., first whether the magnitude of correlation was substantial, and then, whether statistically, the level of significant was 0.05. Similar argument was true for figures in Table 6.01 on page 199.

Table 6.00 : Degree of Correlations Between Various Characteristics and Experiences of Graduates and Income Level

| Characteristics                       | Statistics | Correlation Coefficient | Significant (p) |
|---------------------------------------|------------|-------------------------|-----------------|
| <b>Between College Effects</b>        |            |                         |                 |
| Location of study                     | rpb        | 0.1287                  | 0.016*          |
| <b>Within College Effects</b>         |            |                         |                 |
| Major of study                        | Eta        | 0.3179                  | 0.0005*         |
| University's grades                   | r          | 0.1182                  | 0.029*          |
| Extracurricular Activities            | r          | 0.0262                  | 0.624           |
| Satisfac. with Univ. Facilities       | r          | 0.0386                  | 0.489           |
| Effort in mastering Acc. Subjects     | r          | 0.0846                  | 0.115           |
| College Preparation                   | r          | 0.0701                  | 0.210           |
| <b>Conditional College Effects</b>    |            |                         |                 |
| Gender                                | rpb        | -0.3091                 | .0005*          |
| Age                                   | r          | 0.1344                  | 0.012*          |
| Parents' socio-economic status        | r          | 0.1033                  | 0.558           |
| Global self esteem                    | r          | 0.2328                  | 0.0005*         |
| Specific self esteem                  | r          | 0.1179                  | 0.033*          |
| Academic English Prof.                | r          | 0.0955                  | 0.092           |
| Job Related English Prof.             | r          | 0.1362                  | 0.013*          |
| Overall English Prof.                 | r          | 0.1152                  | 0.044*          |
| Need for Academic English Proficiency | r          | -0.0774                 | 0.174           |
| Need for Job Related English Prof.    | r          | -0.0307                 | 0.099           |
| Need for Overall English Proficiency  | r          | -0.0675                 | 0.241           |
| <b>Job Related Effects</b>            |            |                         |                 |
| Duration of Employment                | r          | 0.3087                  | 0.0005*         |
| Sector of Employment                  | rpb        | -0.2605                 | 0.0005*         |
| Employers Ownership                   | rpb        | 0.2182                  | 0.0005*         |

r = Pearson Product Moment Correlation Coefficient

rpb = Point Biserical Correlation Coefficient

\* Significant at  $p < 0.05$

The relationship between characteristics and experiences in universities and job satisfaction are presented in Table 6.01.

## **6.6 RELATIONSHIP BETWEEN JOB SATISFACTION AND BETWEEN COLLEGE EFFECTS**

### **1. Location of Study (Local or Foreign Universities)**

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between job satisfaction and location of study of respondents. Table 6.01 reports  $r_{pb} = .0172$  and the relationship is not significant. Therefore the null hypothesis was not rejected and it follows that the research hypothesis was not accepted.

## **6.7 RELATIONSHIP BETWEEN JOB SATISFACTION AND WITHIN COLLEGE EFFECTS.**

### **2. Undergraduates Major of Study**

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between job satisfaction and major of studies of respondents. Table 6.01 reports  $\text{Eta} = 0.0592$  and the relationship is not significant. The null hypothesis was not rejected. Therefore the research hypothesis was not accepted.



### 3. University Grades

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between job satisfaction and university's grades of respondents. Table 6.01 reports  $r = .0214$  and the relationship is not significant. The null hypothesis was not rejected. Therefore the research hypothesis was not accepted.

### 4. Extracurricular Activities

The research hypothesis was tested in its null form. A negligible non-significant relationship existed between job satisfaction and extracurricular activities of respondents. Table 6.01 reports  $r = .0746$  and the relationship is not significant. The null hypothesis was not rejected. Therefore the research hypothesis was not accepted.

### 5. Satisfaction with Universities Facilities

The research hypothesis was tested in its null form. A low significant positive relationship existed between job satisfaction and satisfaction with universities facilities. Table 6.01 reports  $r = .2101$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore the research hypothesis was accepted.

### 6. Effort in Mastering Academic Subjects

The research hypothesis was tested in its null form. A low significant positive relationship existed between job satisfaction and effort in



mastering academic subjects of respondents. Table 6.01 reports  $r = .1593$  and the relationship is significant at  $p < 0.05$  (0.006). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

## 7. College Preparation

The research hypothesis was tested in its null form. A low significant and college preparation of respondents. Table 6.01 reports  $r = .2254$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

## 6.8 RELATIONSHIP BETWEEN JOB SATISFACTION AND CONDITIONAL COLLEGE EFFECTS.

### 8. Gender

The research hypothesis was tested in its null form. A negligible non-significant negative relationship existed between job satisfaction and gender of respondents. Table 6.01 indicates  $rpb = -0.0855$  and this relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

### 9. Age

The research hypothesis was stated in its null form. A negligible non-significant positive relationship existed between job satisfaction and age of respondents. Table 6.01 indicates  $r = .0184$  and this relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

#### 10. Parents' Socio-economic Status

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between job satisfaction and parents' socio-economic of the respondents. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

#### 11. Global Self-Esteem

The research hypothesis was tested in its null form. A moderate significant positive and relationship existed between job satisfaction and global self-esteem of respondents. Table 6.01 reports  $r = .3667$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

#### 12. Specific Self-Esteem (Social Confidence)

The research hypothesis was tested in its null form. A low significant positive relationship existed between job satisfaction and specific self esteem of respondents. Table 6.01 reports  $r = .2167$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

### **Relationship Between English Proficiency and Job Satisfaction**

The relationship between English proficiency variable and income level are presented in Table 6.01. The English proficiency variables include: proficiency in academic English , Job related English

proficiency overall proficiency, need for academic English proficiency, need for job related English proficiency, and need for overall English proficiency.

### 13. Academic English Proficiency

The research hypothesis was tested in its null form. A low significant positive relationship existed between job satisfaction and academic English proficiency of respondents. Table 6.01 reports  $r = 0.1006$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

### 14. Job Related English Proficiency

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed job satisfaction and working English proficiency. Table 6.01 reports  $r = 0.0850$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

### 15. Overall English Proficiency

The research hypothesis was tested in its null form. A negligible non significant positive relationship existed between job satisfaction and overall English proficiency. Table 6.01 reports  $r = 0.0930$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.



16. Need for Academic English Proficiency

The research hypothesis was tested in its null form. A negligible non significant negative relationship existed between job satisfaction and the need for academic English proficiency. Table 6.01 reports  $r = -0.0452$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

17. Need for Job Related English Proficiency

The research hypothesis was tested in its null form. A negligible non- significant negative relationship existed between job satisfaction and the need for general/working English proficiency. Table 6.01 reports  $r = -0.0321$  and this relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

18. Need for Overall English Proficiency

The research hypothesis was tested in its null form. A negligible non- significant negative relationship existed between job satisfaction and the need for overall English proficiency. Table 6.01 reports  $r = -0.0362$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.



## 6.9 RELATIONSHIP BETWEEN JOB RELATED VARIABLES AND JOB SATISFACTION

The relationship between job related variables and job satisfaction are presented in Table 6.01. The job related variables include duration of employment, sector of employment, employer's ownership, job fit index and level of income.

### 19. Duration of Employment

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between job satisfaction and duration of employment of respondents. Table 6.01 reports  $r = 0.0809$  and the relationship is not significant. The null hypothesis was not rejected. Therefore the research hypothesis was not accepted.

### 20. Sector of Employment (Public or Private Sectors)

The research hypothesis was tested in its null form. A negligible non-significant positive relationship existed between job satisfaction and types of sectors of employment of respondents. Table 6.01 report  $r_{pb} = +.0503$  and the relationship is not significant. The null hypothesis was not rejected. Therefore the research hypothesis was not accepted.

### 21. Employer's Ownership (Foreign or Local Corporation)

The research hypothesis was tested in its null form. A negligible non-significant negative relationship existed between job satisfaction and

types of employers (foreign or local) of respondents. Table 6.01 reports  $r_{pb} = -0.056$  and the relationship is not significant. The null hypothesis was not rejected. Therefore, the research hypothesis was not accepted.

## 22. Job Fit Index

The research hypothesis was tested in its null form. A moderate significant positive relationship existed between job satisfaction and job fit index of respondents. Table 6.01 reports  $r = .3774$  and the relationship is significant  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore the research hypothesis was accepted.

## 23. Level of Income

The research hypothesis was tested in its null form. A low significant positive relationship existed between job satisfaction and level of income of respondents. Table 6.01 reports  $r = .2516$  and the relationship is significant at  $p < 0.05$  (0.0005). The null hypothesis was rejected. Therefore, the research hypothesis was accepted.

Table 6.01 : Degree of Correlation Between Characteristics and Experiences in Universities of Graduates and Job Satisfaction

| Characteristics                       | Statistics | Correlation Coefficient | Significant (p) |
|---------------------------------------|------------|-------------------------|-----------------|
| <b>Between College Effects</b>        |            |                         |                 |
| Location of study                     | rpb        | 0.0172                  | 0.758           |
| <b>Within College Effects</b>         |            |                         |                 |
| Major of study                        | Eta        | 0.0592                  | 0.291           |
| University's grades                   | r          | 0.0214                  | 0.706           |
| Extracurricular Activities            | r          | 0.0746                  | 0.181           |
| Satisfact. with Univ. facilities      | r          | 0.2101                  | 0.0005          |
| Effort in Mastering Academic subjects | r          | 0.1593                  | 0.006*          |
| College Preparation                   | r          | 0.2254                  | 0.0005*         |
| <b>Conditional College Effects</b>    |            |                         |                 |
| Gender                                | rpb        | -0.0855                 | 0.125           |
| Age                                   | r          | 0.0184                  | 0.744           |
| Parents' socio-economic status        | r          | 0.0578                  | 0.309           |
| Global self esteem                    | r          | 0.3667                  | 0.0005*         |
| Specific self esteem                  | r          | 0.2167                  | 0.0005*         |
| Academic English Prof.                | r          | 0.1006                  | 0.084           |
| Job Related English Prof.             | r          | 0.0850                  | 0.137           |
| Overall English Prof.                 | r          | 0.0930                  | 0.115           |
| Need for Academic English Proficiency | r          | -0.0452                 | 0.442           |
| Need for Job Related English Prof.    | r          | -0.0321                 | 0.575           |
| Need for Overall English Prof.        | r          | -0.0362                 | 0.543           |
| <b>Job Related Effects</b>            |            |                         |                 |
| Duration of Employment                | r          | 0.0809                  | 0.162           |
| Sector of Employment                  | rpb        | 0.0503                  | 0.369           |
| Employers' Ownership                  | r          | -0.056                  | 0.318           |
| Job Fit Index                         | r          | 0.3744                  | 0.0005*         |
| Level of Income                       | r          | 0.2516                  | 0.0005*         |

r = Pearson Product Moment Correlation Coefficient

rpb = Point Biserial Correlation Coefficient

\* Significant at  $p < .05$

In summary, the independent variables that have significant correlation with level of income include: gender, university grades, major of study, global self-esteem, specific self-esteem, general/wroking English proficiency, overall English proficiency, duration of employment, sector of employment (public or private) and finally employers' ownership (foreign or local).

However, with job satisfaction the following independent variables have significant correlation: satisfaction with university's facilities, effort in mastering academic subjects, college preparation, global self esteem, specific self-esteem, job fit index and level of income.

It is interesting to note that except for common global self-esteem and specific self-esteem the two sets of independent variables that significantly correlate with level of income and job satisfaction respectively are different.

Bivariate correlation, however, limits the association between the dependent variable and independent variables one at a time.

In order to select appropriate independent variables to regress simultaneously with the dependent variables, semipartial correlation analysis was carried out. The independent variables that have significant relationship from the previous bivariate analysis were associated with the dependent variables through semipartial corelation. Table 6.02 and Table 6.03 reports these semipartial correlation with level of income and job satisfaction respectively.

Semi partial correlation reflects the strength of the association between dependent variable and independent variables simultaneously. The



independent variables that correlate significantly were then used in the multiple regression analysis to establish the functional relationship between them and the dependent variable.

Table 6.02 : Significant Semi Partial Correlation of Level of Income with Independent Variables

| Independent Variables      | Semi Partial Correlation | Level of Significant |
|----------------------------|--------------------------|----------------------|
| Location of study          | -0.1368                  | 0.046                |
| Gender                     | -0.4235                  | 0.0005               |
| Age                        | 0.1472                   | 0.032                |
| Self-esteem                | 0.2258                   | 0.001                |
| Specific Self-Esteem       | 0.1727                   | 0.012                |
| Majors                     | 0.3019                   | 0.0005               |
| Duration of Employment     | 0.3647                   | 0.0005               |
| Employment of Sectors      | -0.2304                  | 0.001                |
| Employers' Ownership       | 0.1945                   | 0.004                |
| Proficiency in Job Related |                          |                      |
| English                    | 0.1510                   | 0.028                |
| Proficiency in overall     |                          |                      |
| English                    | 0.1447                   | 0.035                |

**Table 6.03 : Significant Semi Partial Correlations of Job Satisfaction with Independent Variables**

| Independent Variables                   | Semi Partial Correlation | Level of Significant |
|---|--------------------------|----------------------|
| Specific Self Esteem                    | 0.2643                   | 0.0005               |
| Global Self Esteem                      | 0.3644                   | 0.0005               |
| Satisfaction with University facilities | 0.2387                   | 0.0005               |
| College Preparation                     | 0.2187                   | 0.001                |
| Job Fit Index                           | 0.4055                   | 0.0005               |
| Level of Income                         | 0.1619                   | 0.0005               |

## 6.10 MULTIPLE REGRESSION MODEL

### **Dependent Variable: Level of Income**

In order to be able to assess the strength of the influence of each independent variable on the dependent variable, a multiple regression model was used. Partial Correlation analysis as demonstrated in the earlier section identified only a few of the independent variables proposed in the conceptual framework, were significantly correlated with level of income. As a result the new hypothesis model is shown in Figure 6.00

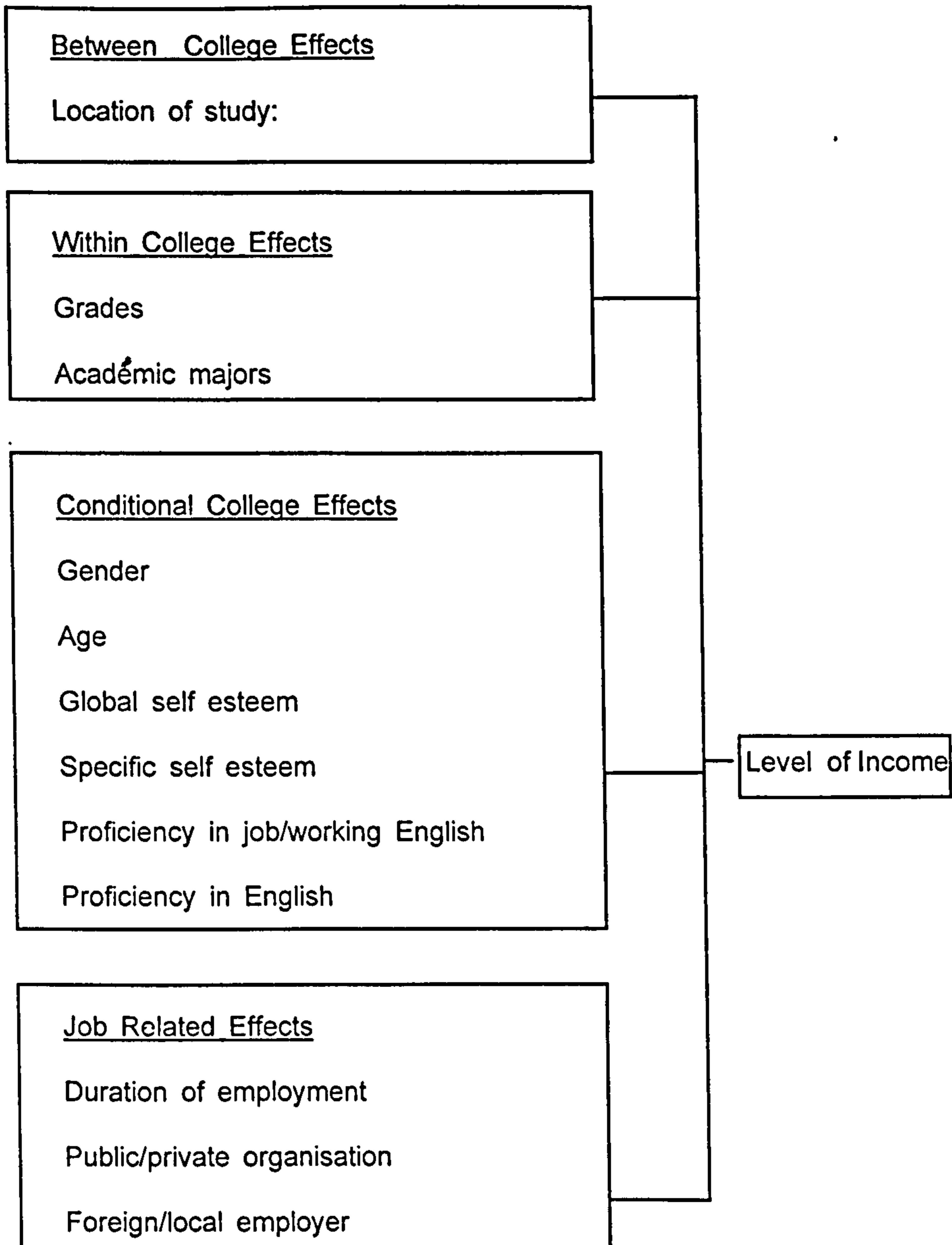


Figure 6.00: New hypothesis : Relationship Between  
Income Level and Independent Variables

On applying stepwise multiple analysis on the selected independent variables, the following regression equation (with unstandardized coefficients) was established.

$$\begin{aligned}
 \text{*Income Level} = & 4839.51 - 3956.22 (\text{gender}) + 1154.78 (\text{global self esteem}) \\
 & + 1368.64 (\text{Overall English Proficiency}) + 895.45 (\text{aca} \\
 & \text{demic major} + 159.37 (\text{duration of job}) + 1999.17 \\
 & (\text{Employer's ownership})
 \end{aligned}$$

The variables location of study, age, proficiency in working English, specific self esteem and sector of employment (public/private) have been eliminated from the analysis by the stepwise procedure. This is due to the fact that their impact to level of income if they were "forced" into the equation would be shown to be almost zero.

The above question which represented the best predictor of income of graduates could be used to predict the level of income of the graduates by substituting the various scores of the relevant independent variables. However, it is the relative impact of these variables on income that provides the main area of interest for this study. In other words the study indicated an interest to find out how well each independent variable explains the dependent variable.

Table 6.04 indicated that  $R^2$  of this analysis is 0.40572 or a more conservative estimate of  $R$  adjusted of 0.3841. It implies that at least 38% of the variance in level of income is explained by the six variables. The multiple correlation  $R$  of the analysis is 0.63696 and it expresses the correlation between dependent variable (income level) and all the six independent variables collectively. The null hypothesis that the multiple correlation is zero in the population from which the random sample was taken was rejected. This is so, since the calculated  $F = 23.44$  is significant at  $p < 0.00005$ , suggesting that it is extremely improbable that  $R^2$  in the population is zero.

---

Note : Since dummy coding used for gender (male) = 0  
local employer = 0  
academic major (soft-pure) = 0

they are not nominally represented in regression result.



Table 6.04 : Multiple Regression of Level of Income

| <u>Dependent Variable - Level of Income</u> |          |                   |               |                |             |                                   |
|---|----------|-------------------|---------------|----------------|-------------|-----------------------------------|
| Step  | MultR    | Rsq               | Rsq Change    | F(Eqn)         | SigF        | Variable                          |
| 1   | .4235    | .1794             | .1794         | 46.115         | .0005       | GENDER                            |
| 2.  | .5193    | .2697             | 0.0903        | 38.775         | .0005       | Job Duration                      |
| 3.  | .5645    | .3187             | 0.0490        | 32.586         | .0005       | Self esteem                       |
| 4.  | .5997    | .3597             | 0.0410        | 29.212         | .0005       | Employer's<br>ownership           |
| 5.  | .6196    | .3839             | .0242         | 25.792         | .0005       | Academic<br>major                 |
| 6.  | .6370    | .4057             | 0.0218        | 23.44          | .0005       | Overall<br>English<br>Proficiency |
| Multiple R                                  |          |                   | .63696        |                |             |                                   |
| R Square                                    |          |                   | .40572        |                |             |                                   |
| Adjusted R Square                           |          | .38841            |               |                |             |                                   |
| Standard Error                              |          |                   | 4007.75399    |                |             |                                   |
| Analysis of Variance                        |          |                   |               |                |             |                                   |
|   |          |                   | DF            | Sum of Squares |             | Mean of Square                    |
| Regression                                  |          |                   | 6             | 2258930685.92  |             | 376488447.65                      |
| Residual                                    | 206      |                   | 3308790964.59 |                | 16062092.06 |                                   |
| F = 23.439                                  |          | Signif F = .00005 |               |                |             |                                   |
| <u>Variables in the Equations</u>           |          |                   |               |                |             |                                   |
| Variable                                    | B        | SEB               | Beta          | Tolerance      | T           | Significance T                    |
| Gender                                      | -3956.22 | 647.79            | -.351509      | 0.870852       | -6.07       | 0.0000                            |
| Job Duration                                | 159.37   | 29.79             | .295938       | 0.942718       | 5.35        | 0.0000                            |
| Self Esteem                                 | 1154.78  | 446.05            | .152289       | 0.833723       | 2.589       | 0.0103                            |
| Employer's<br>Ownership                     | 1999.17  | 607.58            | .180057       | 0.963369       | 3.290       | 0.0012                            |
| Academic Major                              | 895.45   | 277.30            | .183623       | 0.892171       | 3.229       | 0.0014                            |
| Overall English<br>Proficiency              | 1368.64  | 497.16            | .166390       | 0.789703       | 2.753       | 0.0064                            |
| (constant)                                  | 4839.51  | 2228.67           |               |                | 2.171       | 0.0310                            |

In terms of contribution toward  $R^2$ , each independent variables was entered according to the magnitude of its contribution to  $R^2$ . Table 6.04 shows that the variables were entered in the sequence: gender, job

duration, self-esteem, employer's ownership, academic major, and overall English Proficiency and each makes an incremental contribution to  $R^2$  of 0.1794, 0.0903, 0.049, 0.041, 0.0242, 0.0218 respectively. These add up to the unadjusted  $R^2$  value of 0.40572. Each contribution to  $R^2$  was significant to 0.0000 (or  $p < 0.00005$ ). Clearly gender was by far the major contributor to  $R^2$ .

From the above analysis it is proposed that the revised relationship of model between income level and relevant independent variable is as in Figure 6.01.

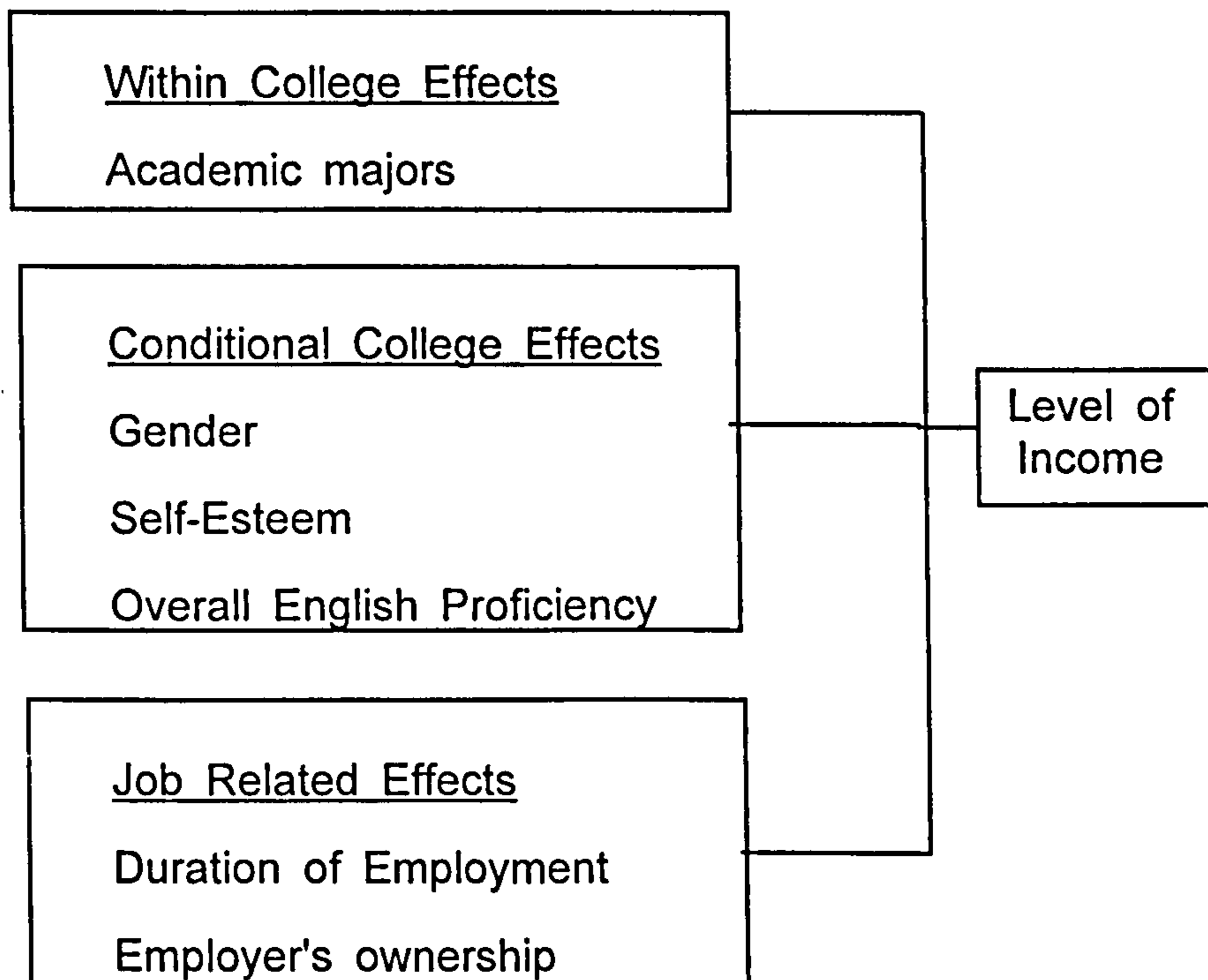


Figure 6.01: Revised Relationship Between Level of Income and Independent Variables

## Dependent Variable: Job Satisfaction

Partial correlation analysis identified independent variables; specific self esteem, global self esteem, satisfaction with university facilities, college preparation, job fit index and level of income to be significantly partially correlated to dependent variable job satisfaction. Figure 6.02 indicated the new hypothesis model.

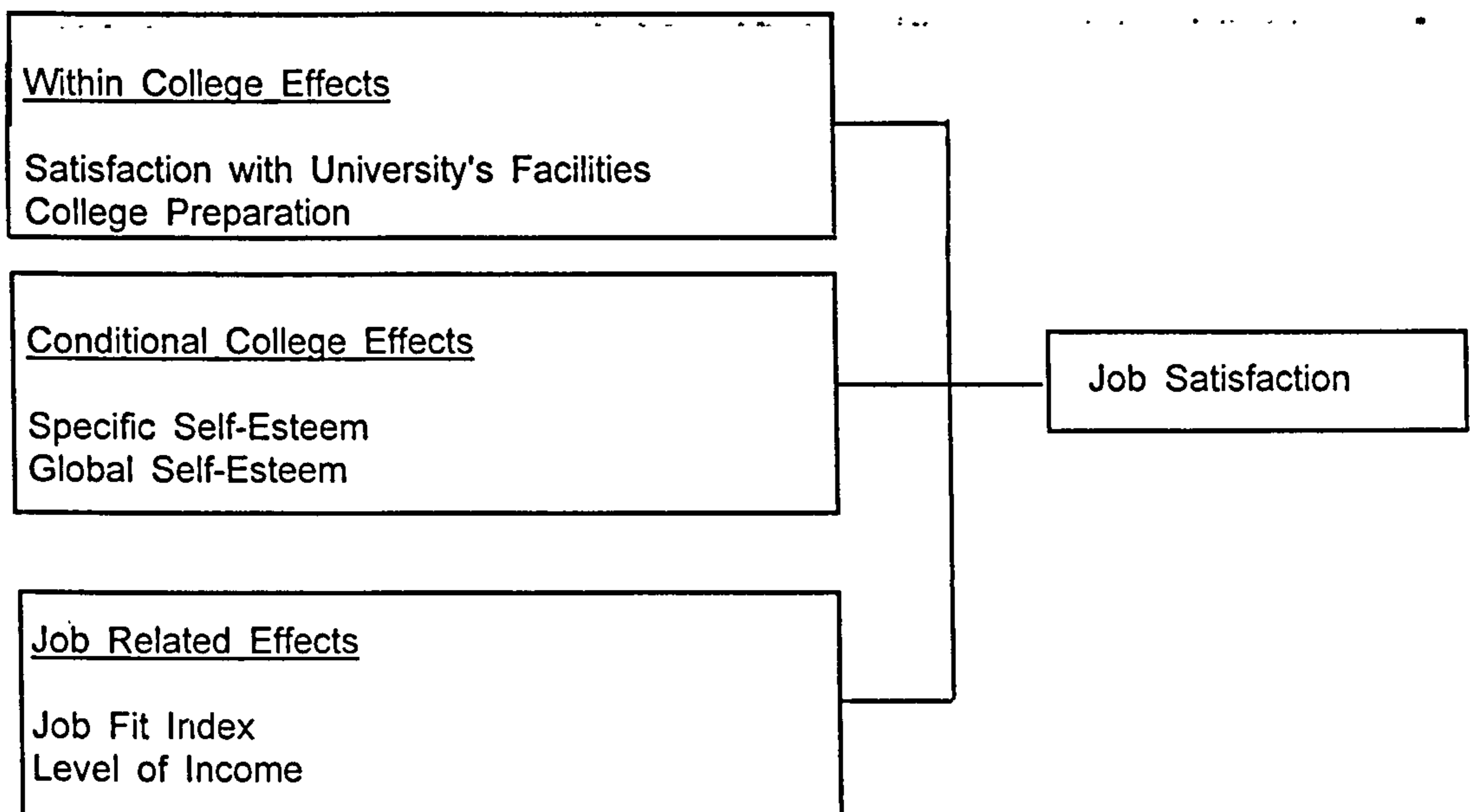


Figure 6.02 : New Hypothesis : Relationship Between Job Satisfaction and Independent Variables

On applying the multiple regression analysis between the above independent variables on the dependent variable job satisfaction, the following regression equation (with unstandardized coefficients) was established.

$$\begin{aligned} \text{Job satisfaction} = & 0.420234 + 0.155664 (\text{Job fit index}) + 0.249412 \\ & (\text{self-esteem}) + 1.9710 \times 10^{-5} (\text{level income}) \\ & + 0.13610 (\text{satisfaction with university facility}) \\ & + 0.198786 (\text{specific self esteem}) \end{aligned}$$

The variable college preparation has been eliminated by the stepwise regression procedures.

The above equation which represents the best predictor of job satisfaction could be used to predict the level of job satisfaction of the graduates by substituting the relevant scores of the independent variables in the regression equation. As before the relative impact of the independent variables provides the main area of interest for this study. We would like to find out how well each independent variable explains the dependent variable.

Table 6.05 : Multiple Regression of Job Satisfaction

| <u>Dependent Variable - Job Satisfaction</u> |                          |                         |                   |                |       |                      |
|--|--------------------------|-------------------------|-------------------|----------------|-------|----------------------|
| Step   | MultR                    | Rsq                     | Rsq Change        | F(Eqn)         | SigF  | Variable             |
| 1  | .3960                    | .1568                   | .1568             | 43.511         | .0005 | JOB FIT INDEX        |
| 2.   | .4988                    | .2488                   | 0.0920            | 38.58          | .0005 | GLOBAL SELF-ESTEEM   |
| 3.   | .5301                    | .2810                   | 0.0322            | 30.23          | .0005 | INCOME               |
| 4.   | .5467                    | .2989                   | 0.0179            | 24.62          | .0005 | SPECIFIC SELF-ESTEEM |
| 5.   | .5599                    | .3135                   | 0.0146            | 21.08          | .0005 | SATISUNI             |
| Multiple R                                   |                          |                         | .55993            |                |       |                      |
| R Square                                     |                          |                         | .31352            |                |       |                      |
| Adjusted R Square                            |                          |                         | .29860            |                |       |                      |
| Standard Error                               |                          |                         | .67025            |                |       |                      |
| Analysis of Variance                         |                          |                         |                   |                |       |                      |
|  |                          |                         | DF                | Sum of Squares |       | Mean of Square       |
|  |                          |                         | 5                 | 47.18824       |       | 9.43765              |
|  |                          |                         | 232               | 103.32318      |       | .44923               |
| F = 21.0084                                  |                          |                         | Signif F = .00005 |                |       |                      |
| <u>Variables in the Equation</u>             |                          |                         |                   |                |       |                      |
| Variable                                     | B                        | SEB                     | Beta              | Tolerance      | T     | Significance T       |
| JOB FITINDEX                                 | 0.155664                 | 0.027756                | 0.315408          | .943685        | 5.608 | 0.0000               |
| GLOBAL SELF-ESTEEM                           | 0.249412                 | 0.069327                | 0.213568          | .846952        | 3.598 | 0.0004               |
| INCOME                                       | 1.79107X10 <sup>-5</sup> | 5.8609X10 <sup>-6</sup> | 0.172221          | .939778        | 3.056 | 0.0025               |
| SPECIFIC SELF-ESTEEM                         | 0.198786                 | 0.084858                | 0.134814          | .901189        | 2.343 | 0.02                 |
| SATISUNI                                     | 0.136100                 | 0.061538                | 0.124041          | 0.948852       | 2.212 | 0.028                |
| CONSTANT                                     | 0.420234                 | 0.402186                |                   |                | 1.045 | 0.2972               |



Table 6.05 indicated that  $R^2$  of this analysis is 0.31552 or a more conservative estimate of  $R^2$  adjusted of 0.29860. It implies that at least 29% of the variance in job satisfaction is explained by the five independent variables.

The multiple correlation of the analysis is 0.55993 and it expressed the correlation between dependent variable (job satisfaction) and all the five independent variables collectively. The null hypothesis that the multiple correlation is zero in the population from which the random sample was taken is rejected. This is so since the calculated  $F = 21.0084$  is significant at  $p < 0.00005$  suggesting that it is extremely improbable that  $R^2$  in the population is zero.

In terms of contribution toward  $R^2$ , Table 6.05 shows that independent variables were entered according to the magnitude of its contribution to  $R^2$  in sequence of: job fit index, global self-esteem, level of income, satisuni and specific self-esteem and each has values of multiple  $R^2$  incremental change of 0.1568, 0.092, 0.0322, 0.0179 and 0.0146 respectively. These added to the unadjusted  $R^2$  value of 0.34547. Each contribution to  $R^2$  was significant at 0.000 (or  $p < 0.0005$ ). Clearly job fit index was by far the major contributor to  $R^2$ .

From the above analysis, it is proposed that the revised relationship of model explaining job satisfaction is as in Figure 6.03

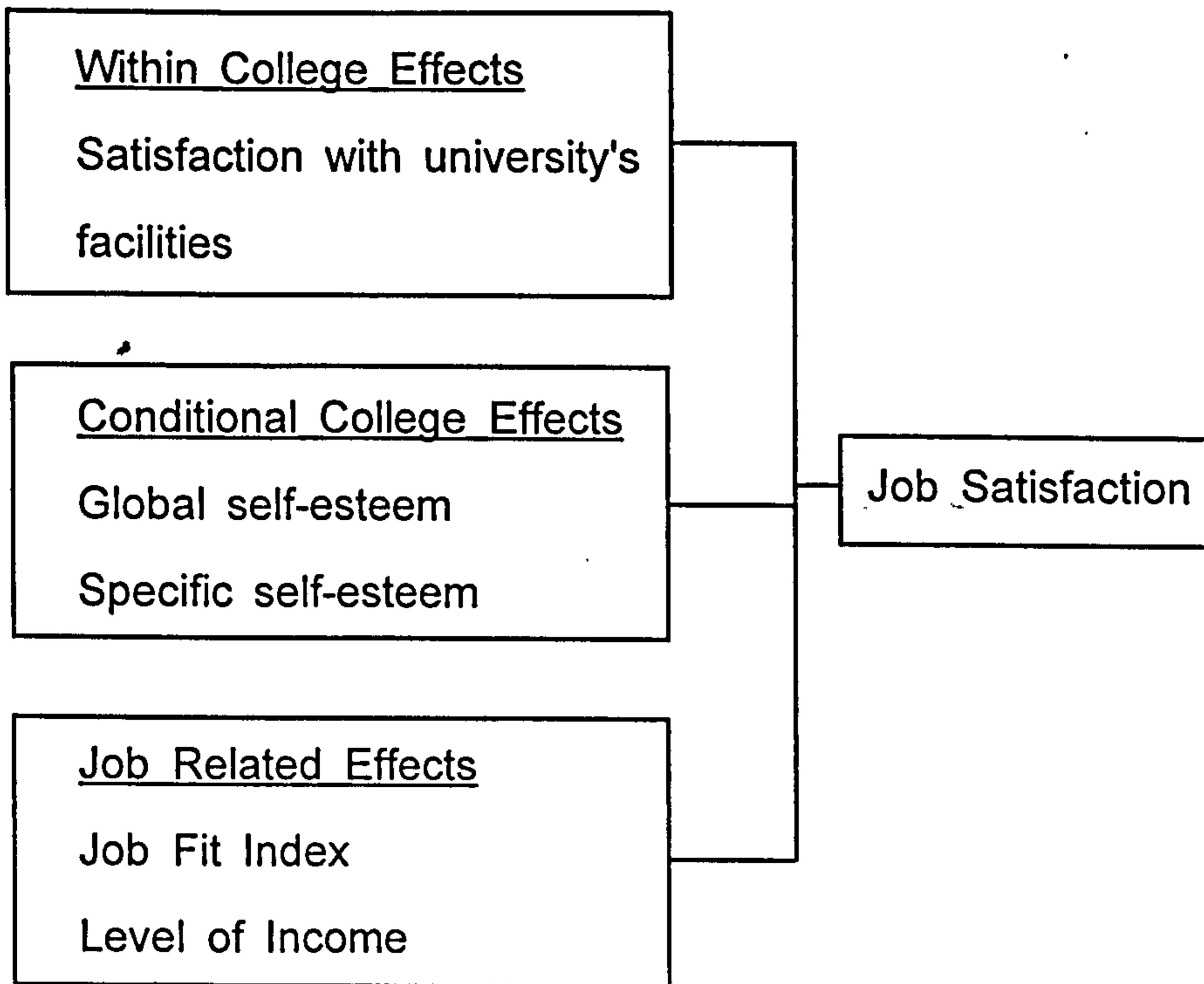


Figure 6.03 : Revised Relationship Between Job Satisfaction and Independent Variables

## 6.11 DISCUSSION ON RESEARCH FINDING (2)

### Functional Relationship Between Income Level and Score of Independent Variables

This section of the chapter attempts to relate the relationship and the strength of the independent variables that influenced the differences in the level of income of graduates. One of the surprising findings of the relationship is between college effect i.e. the place of study either foreign or local is no longer in the equation. In spite of the significant difference of the income of the two cohorts when measured alone, it is no longer a significant influence of income differences when other relevant independent variables were taken into consideration.

Looking at values of contribution of  $R^2$  to the multiple regression equation, gender has the largest magnitude, i.e., about 18%. This is very much in agreement with the findings in literature review (e.g. Eliou [1987] and Sixth Malaysia Plan).

Table 6.06 compared average income level between male and female graduates by location of study.

Table 6.06 : A Comparison of Graduates Average Yearly Income in Ringgit Malaysia by Gender and Location of Study

| Graduates             | Male      |     | Female   |     | Total    |     |
|-----------------------|-----------|-----|----------|-----|----------|-----|
|                       | Amount    | No. | Amount   | No. | Amount   | No. |
| Foreign Trained       | 21,000.07 | 136 | 16177.82 | 68  | 1945.32  | 204 |
| Locally Trained       | 19,172.47 | 106 | 15425.19 | 42  | 18109.05 | 148 |
| Total (All graduates) | 20,255.75 | 242 | 15890.45 | 110 | 18891.59 | 352 |

On average female graduates earned only 78.4% of what male graduates earned per year. The Sixth Malaysia Plan reported that the female students have preference for non-technical and non-vocational disciplines and hence end up in the lower-paying jobs. Table 6.07 compared average income by gender according to the major of studies. As far as the differential in earning according to different majors, the research agrees with past works that support the theory of the segmented labour market, where all jobs are not in a single market. Among the past work, Smart (1988), Pascarella & Smart (1990) reported that graduates majoring in "hard" and "applied" fields (eg. Engineering and Computer Science) have significant direct and indirect impact on their income level especially those who were working in the private sector. The research indicated similar finding and this is shown in Table 6.07. Graduates majoring in hard-applied were earning 35% more than those who majored in soft-pure subjects.

There could be several explanations for higher income accorded to graduates majoring in hard-applied and possibly soft-applied (eg. accounting and business management) majors. These particular fields of study are characterised by a relatively well defined body of knowledge and skills, an emphasis on scientific skill and quite often an applied orientation (Smart 1988). These majors tend to have close links to occupations with relatively high average earnings.

It may also reflect the fact the employers use undergraduate major as a sorting device (screening hypothesis) for hiring and for assigning people to better paying jobs. Employers may believe that graduates selecting those fields are typically brighter than those of other majors, that



they have more useful interest and abilities, or that their academic preparation has been more vigorous and more immediately relevant to a range of jobs than those in soft-pure fields (Solomon, 1981 cited by Pascarella and Terenzini 1991).

The differential in earning for different majors is also largely a function of prevailing market condition. In case of Malaysia, at the time of this survey the country was experiencing an economic expansion and fast industrialisation. In this market graduates in these two main majors were well sought after by the employers.

The figures indicated that the field "hard-applied" paid the most and yet only 28.4% females majored in this field versus 59.3% of the males graduates. This study also indicated the preference of women graduates for public sector jobs. Table 6.08 indicated that public sector employed 54% male and 46% female graduates, whereas the private sector employed 75% males and 25% females graduates. In early stage of employment the public sector jobs are characterised by regular office hours which may have attracted female graduates and in most cases are less competitive than the private sector jobs. Nevertheless, the regression analysis shows that after accounting for these factors and other factors such as self-esteem, English proficiency, duration of employment and employer's ownership, there is a significant "gender" effect on the variation of income.

Table 6.07 : A Comparison of Average Yearly Income of Graduates in Ringgit Malaysia by Major of Study and Gender

| Major of Study  | Male      |     | Female   |     | Total    |     |
|-----------------|-----------|-----|----------|-----|----------|-----|
|                 | Amount    | No. | Amount   | No. | Amount   | No. |
| 1. Soft-pure    | 15962.18  | 11  | 14255.11 | 9   | 15194.00 | 20  |
| 2. Soft-Applied | 19294.15  | 76  | 15352.94 | 55  | 17639.00 | 131 |
| 3. Hard-pure    | 19615.09  | 11  | 14382.57 | 14  | 16684.80 | 25  |
| 4. Hard-Applied | 21170.53  | 143 | 17854.38 | 31  | 20579.00 | 174 |
| Total           | 20,270.00 | 241 | 15849.00 | 109 | 18893.00 | 350 |

Table 6.08 : A Comparison of Employment Sectors (Public Vs Private of Graduates by Gender

| Gender<br>Employment<br>Sector | Male |            | Female |            | Total |            |
|--------------------------------|------|------------|--------|------------|-------|------------|
|                                | No.  | Percentage | No.    | Percentage | No.   | Percentage |
| Public                         | 44   | 54         | 38     | 46         | 82    | 23         |
| Private                        | 199  | 73         | 74     | 27         | 273   | 77         |
| Total                          | 243  | 68.5       | 112    | 31.5       | 355   | 100        |

Nevertheless a further confirmation was needed to see whether there was any interaction of gender to other independent variables. Table 6.09 summarised the two way analysis of variance performed to test the possibility of interaction of gender to location of study in explaining the variation of income of the graduates. The null hypothesis investigated were, location of study effect, gender effect, and the effect of interaction between gender and location of study.

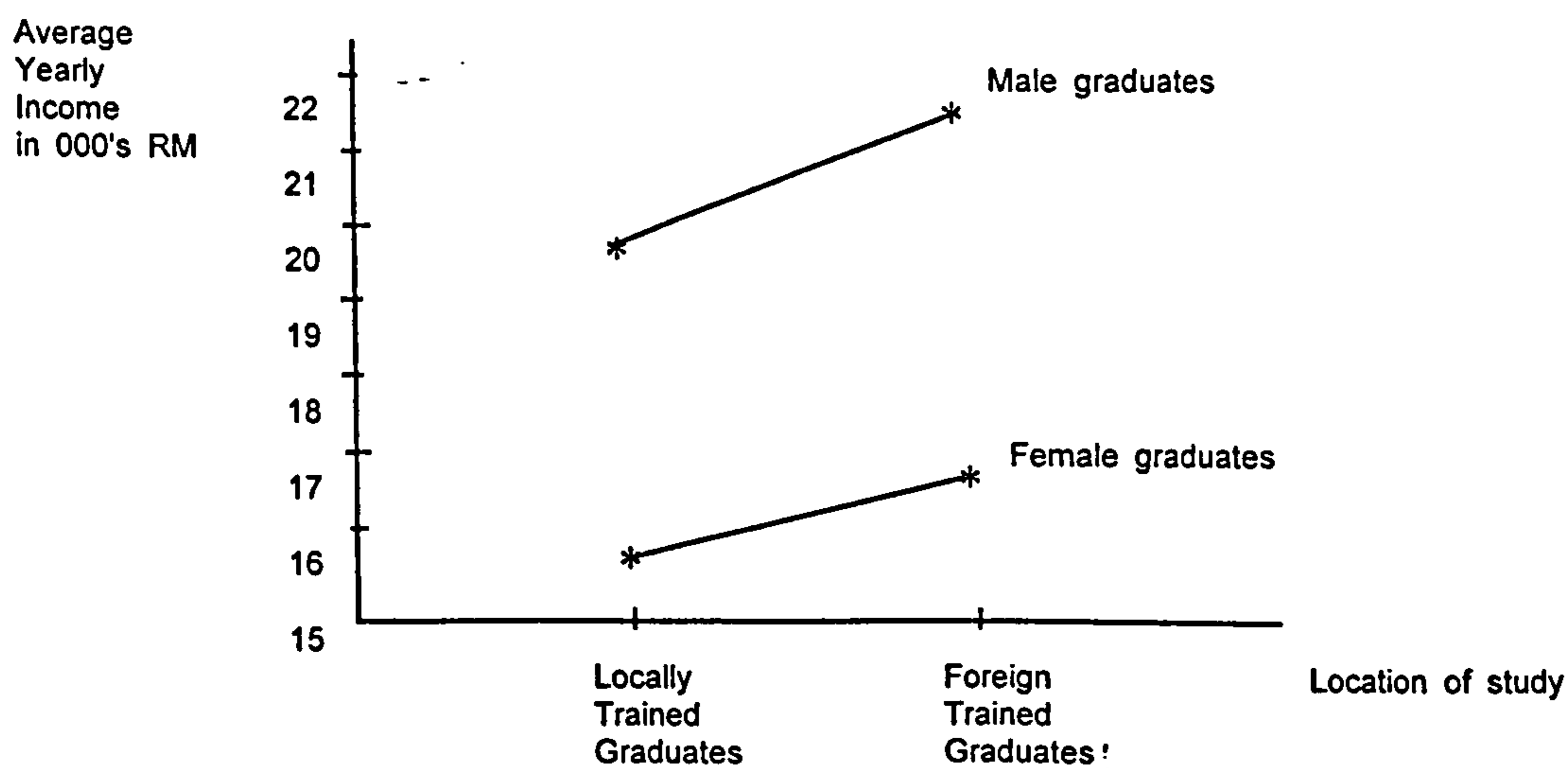
Table 6.09: Two Way Analysis of Variance (Generalised Format) for Average Yearly Income by Location of Study and Gender.

| Sources           | SS           | df  | MS         | F     | Significant Level |
|-------------------|--------------|-----|------------|-------|-------------------|
| Location of study | 211085667.7  | 1   | 221085668  | 9.47  | 0.002             |
| Gender            | 1441096572.0 | 1   | 1441096572 | 64.64 | 0.000             |
| Interaction       | 24963724.65  | 1   | 24963725   | 1.12  | 0.291             |
| Error             | 7758775774.0 | 348 | 2229533    |       |                   |
| Total             | 9435921739   | 351 |            |       |                   |

Looking at the significant level in Table 6.09, the following results were established: foreign trained and locally trained graduates earned different average yearly income and male and female graduates earned different average yearly income (similar results were reported earlier in Table 5.36 on page 155 and in Table 6.06 on page 211).

However, the null hypothesis saying that no interaction between location of study and gender was accepted, Figure 6.04 illustrated further the relationship between income with location of study and gender.

Figure 6.04 : Plot of Average Yearly Income of Male & Female Graduates by Location of Study Exhibiting No Interaction





A graph with parallel or almost parallel lines such as above will occur when there is no interaction between the two factors. When there is no interaction we say that we have additivity or additive effect. In the above result, among locally trained graduates, male graduates earned RM3747 more than female graduates, whereas among foreign trained graduates, males graduates earned RM4823 more than female graduates.

Table 6.10 summarised the two way analysis of variance performed to test the possibility of interaction effect of gender with major of studies to the graduates' average yearly income.

Table 6.10: Two Way Analysis of Variance (Generalised Format) for Average Yearly Income by Major of Study and Gender.

| Sources                                    | SS          | df  | MS         | F     | Significant Level |
|--|-------------|-----|------------|-------|-------------------|
| Major of Study                             | 548713916.7 | 3   | 182904639  | 8.48  | 0.000*            |
| Gender                                     | 1466959888  | 1   | 1466959888 | 68.04 | 0.000*            |
| Interaction (gender and location of study) | 39646382.79 | 3   | 13215461   | 0.61  | 0.607             |
| Error                                      | 7373950523  | 342 | 21561259   |       |                   |
| Total                                      | 9429270710  | 349 | 27017968   |       |                   |

\* Significant at  $p < 0.05$

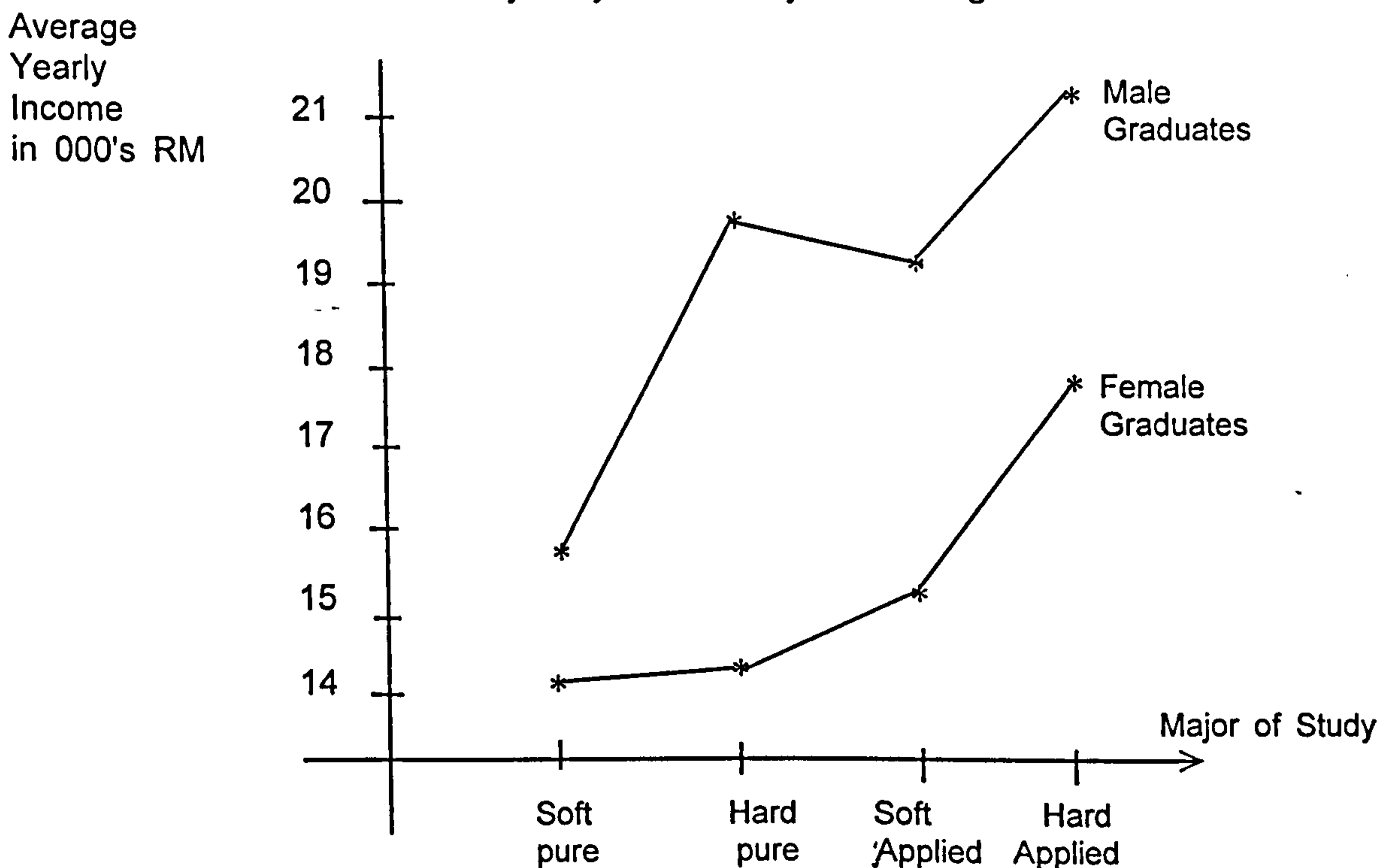


Null hypothesis tested in the above analysis were

- (i) Average yearly income were equal for both female and male graduates.
- (ii) Average yearly income were equal among graduates who followed different major of studies.
- (iii) There was no interaction between gender and major of study.

Table 6.10 indicated that the first two null hypothesis were rejected. (similar findings were reported in Table 6.06 and Table 6.07). The third null hypothesis was accepted and hence implying that there was no interaction effect of gender and major of study in explaining the variation of the average yearly income of the graduates. Figure 6.05 illustrated further the relationship between major and gender in affecting the average yearly income of the graduates.

Figure 6.05: Plot of Average Yearly Income of Male and Female Graduates by Major of Study Exhibiting No Interaction.



The fact that the two lines of income of female and male graduates that were almost parallel (do not intersect) could be interpreted as an indication of no interaction between major of study and gender in explaining the variation of the average yearly income. On the average, for every major of study male graduates were earning more than the female graduates.

These findings are not unique to Malaysia. In an article in THE STAR October 16, 1995 which quoted statistics of the Labour Department USA 1990, it was summarised that women still earned less than men in comparable jobs in the United States. In 1990, full time women workers earned an average of 66% of what men were paid. Professional white women younger than 30 years commanded 84% of what their white male counterparts were paid. The salary gap is least in technical jobs and greatest in service jobs. The same report indicated that even for jobs that required the same level of skill such as custodial work, women were still often paid less.

This phenomenon that is true everywhere else might be true in Malaysia. Women jobs are perceived as less valuable or less difficult than men's jobs or it could be that women are given the same duties as men but with a lesser title and pay, or they are not considered for promotion by male bosses who steer away from giving women jobs that might require time away from children on nights or weekend (THE STAR October 16, 1995).

In the previous chapter, it was indicated that employment rewards for graduates working in the private sector was higher than those who worked in the public sector. This research investigated further the possibility that organizations that had foreign participation awarded higher income to graduates especially to foreign trained graduates.

Table 6.11 compares the average yearly income of graduates working in the local organization (public and private) and in organization with foreign participation. The figures indicated that graduates earned more working in the organization with foreign participation, i.e., RM 20,737 as compared to only RM 18,198 working in local organizations. The average difference in income earned by foreign trained graduates in the two types of organization is RM 2564. The figure for locally trained graduate is RM 1913.

Table 6.11 : A Comparison of Average Yearly Income of Graduates in Ringgit Malaysia in Local and Foreign Owned Organisation by Location of Study

| Graduates       | Local Organization<br>(public & private) |     | Foreign Organization<br>(private) |     | Total    |     |
|-----------------|--|-----|-----------------------------------|-----|----------|-----|
|                 | Amount                                   | No. | Amount                            | No. | Amount   | No. |
| Foreign Trained | 18587.93                                 | 133 | 21152.26                          | 69  | 19463.87 | 202 |
| Locally Trained | 17766.66                                 | 120 | 19679.45                          | 27  | 18117.95 | 147 |
| Total           | 18198.40                                 | 253 | 20737.97                          | 96  | 18896.96 | 349 |

Following the same procedure, a three way analysis of variance was performed (see Table 6.12) to test the possibility of interaction between gender, location of study and the types of employer's ownership in explaining the variation of graduates' incomes.



Table 6.12: Three Way Analysis of Variance (Generalised Format) for Average Yearly Income of Graduates by Location of Study, Employer's Ownership and Gender.

| Sources                   | SS          | df  | MS                   | F     | Significant Level |
|---------------------------|-------------|-----|----------------------|-------|-------------------|
| Employer's Ownership (EO) | 365642649.4 | 1   | 365642649            | 16.91 | 0.000*            |
| Location of Study (LO)    | 133343117.4 | 1   | 133343117            | 6.17  | 0.013*            |
| Gender (G)                | 1440703193  | 1   | 1.44x10 <sup>9</sup> | 66.63 | 0.000*            |
| Interaction of G by EO    | 6523801.4   | 1   | 65223801             | 3.02  | 0.083             |
| Interaction of G by LO    | 16346138.26 | 1   | 16346138             | 0.76  | 0.385             |
| Interaction of EO by LO   | 29777865.18 | 1   | 29777865             | 1.38  | 0.241             |
| Interaction of G by EO    | 4692788.33  | 1   | 4692788.33           | 0.22  | 0.642             |
| Error                     | 7373783835  | 341 | 21624000             |       |                   |
| Total                     | 9429513389  | 348 |                      |       |                   |

\* Significant at  $p < 0.05$

The usual null hypothesis were set up and the results of the three way analysis of variance in Table 6.12 indicated the following results:-

1. Graduates working in different types of employer earned different average yearly incomes. Similar result was reported in Table 6.11. where graduates working in foreign owned corporation, earned an average



yearly income of RM2539 more than those graduates who were working in local organisation.

2. Foreign trained and locally trained graduates earn different average yearly income which was similarly reported in Table 6.11.
3. Graduates of different gender earned different average yearly income as reported in Table 6.06.
4. there was no significant interaction effect between gender, location of study and employers ownership in explaining the variation of income of the graduates.

Table 6.13 compares the average yearly income of graduates in Ringgit Malaysia by employers ownership and gender.

Table 6.13 : A Comparison of Average Yearly Income of Graduates in ringgit Malaysia by Employer's Ownership and Gender

| Graduates | Local Organization<br>(public & private) |     | Foreign Organization<br>(private) |     | Total    |     |
|-----------|--|-----|-----------------------------------|-----|----------|-----|
|           | Amount                                   | No. | Amount                            | No. | Amount   | No. |
| Male      | 19432.25                                 | 170 | 22291.5                           | 70  | 20266.21 | 240 |
| Female    | 15671.22                                 | 83  | 16555.3                           | 26  | 15882.11 | 109 |
| Total     | 18198.4                                  | 253 | 20737.97                          | 96  | 18896.96 | 349 |

In the above Table 6.13 we can see that on average in the local organizations male graduates earned RM3761 more than female graduates and in the foreign own organizations males earned an average of RM5736 more than females graduates per year. Figure 6.04 on page 215 together with Figure 6.06 and Figure 6.07 illustrated the various additive

relationships of the variables gender, location of study and employer's ownership in explaining the variation of the income level of graduates.

Figure 6.06: Plot of Average Yearly Income of Male and Female Graduates by Major of Study Exhibiting No Interaction.

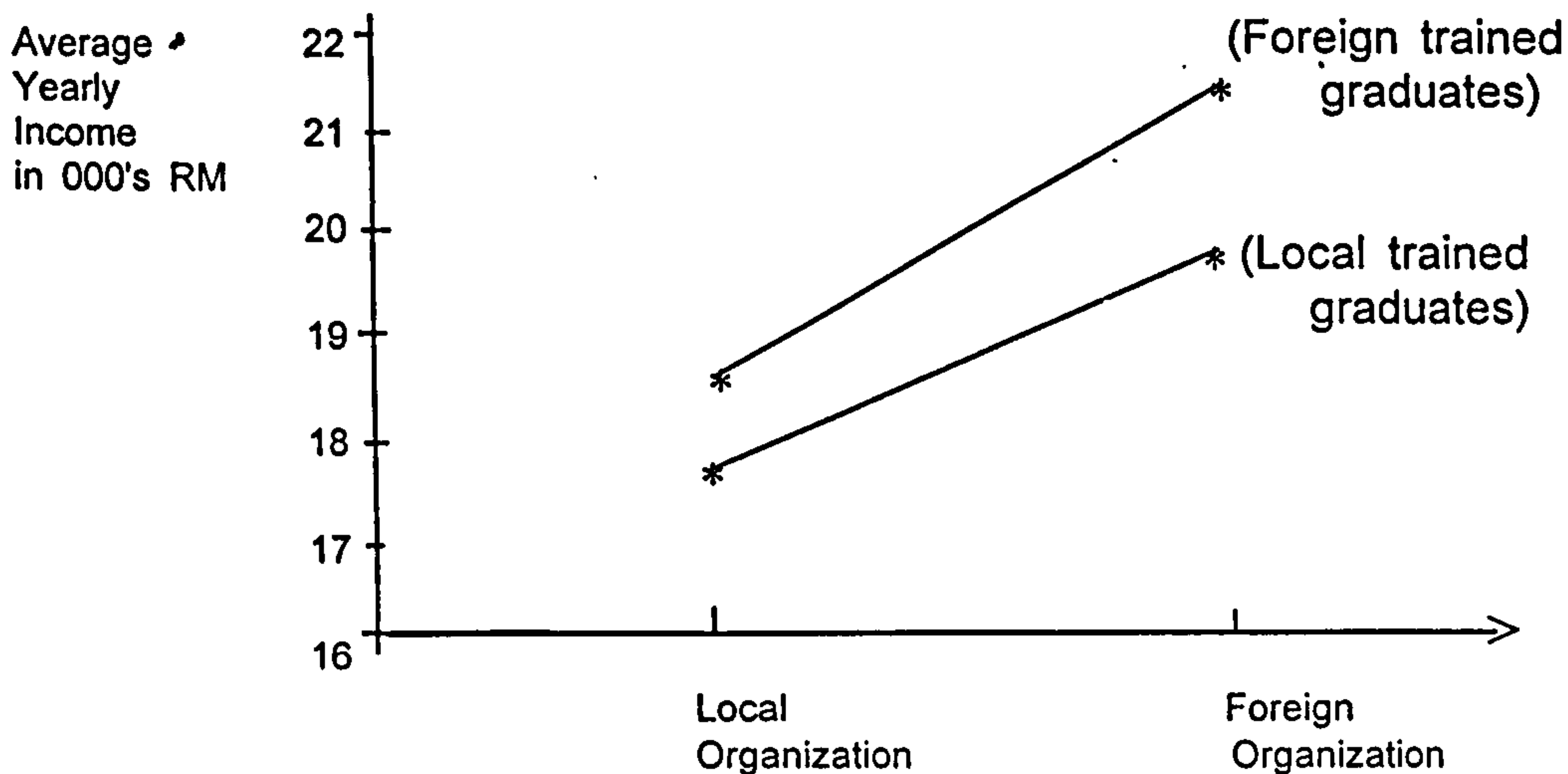
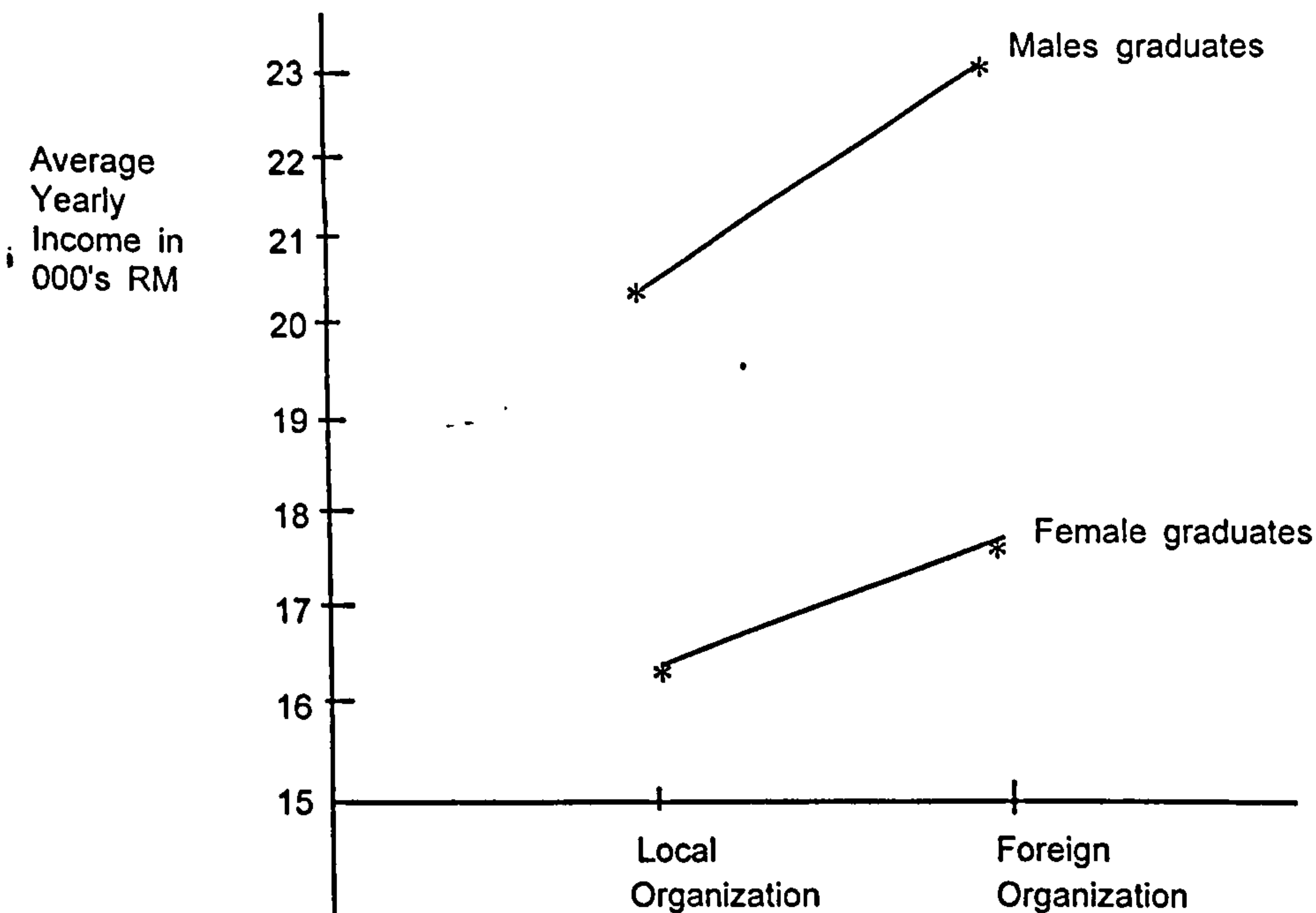


Figure 6.07: Plot of Average Yearly Income of Male and Female Graduates by Employer's Ownership Exhibiting No Interactions.



These findings may lead us to the conclusion of the possibility of application of screening hypothesis in which the foreign employers may have a higher regard for foreign qualifications.

In this case one cannot overrule the possibility that employers may not select or reward individuals solely on the rationale of potential productivity. Rather, factors such as simple snobbery, image and social class may also enter into the decision (Jenks et al., 1979).

Another variable used to explain the differences in income level is the duration of employment. The fact that it is in the regression equation indicates the preference of employers for workers with experience or in other words duration has the additive effect on the income level. To a certain extent this explains the scenario of the internal labour market. Here, the candidates for a particular position are conveniently selected from an internal pool even though a better candidate may be available from the open market. The above finding, together with the discovery that foreign trained graduates were slightly younger, may suggest the possibility of reducing the period of training in the local institutions and placing the responsibility of pre-employment training to the employers. In fact the government has instructed local universities and professional bodies to review the possibility of shortening the period of study from post - SPM by one year (Higher Education, 1995, IEM, 1995). Among the methods suggested were, curriculum and academic calendar revision together with active participation by employer to provide in house (internship) training for the fresh graduates. The shortening of period and incentives in term of tax exemption for pre-employment training by private sectors will accelerate the production of skilled graduates.



Self-esteem which contributed to 0.049  $R^2$  change explains the importance of personality trait in employment outcomes. High self esteem individuals differ from their low self esteem counterparts in the way they think, feel and perhaps more importantly behave.

However, this research did not establish the variables that contributed towards the variation in self-esteem. further studies are needed to establish the factors that explain differences in self-esteem. The research findings established that out of 40% in changes of  $R^2$ , i.e. the differences in in income explained by significant independent variables, 4.9% of it is due to the personality trait of self-esteem.

The explanation why English proficiency was found to be significant in explaining the differences in income level could be due to the fact that this variable is considered both as a cognitive and an affective skill. It is cognitive since it affects academic performance and hence possibly job performance. It is an affective skill since in the Malaysian context, it is a very prominent language in business, legal system and to a certain extent in the government administrative sector.

Among the different version of measuring English proficiency, overall English proficiency (i.e., proficiency in academic and job environment) was found to be significant ( $R^2$  change of 0.0218) in explaining the differences of income level.



## **Functional Relationship Between Job Satisfaction and Scores of Independent Variables**

This chapter also attempts to relate the relationship and strength of independent variables in influencing the differences in the job satisfaction of graduates. As reported in Table 6.05, the multiple regression established was with multiple R of 0.55993 and R square of 0.31352. This modest relationship was interesting enough, since the independent variables found to explain the differences in job satisfaction and income level are not identical. The following variables: job fit index, self esteem, specific self esteem, income level and satisfaction with university facilities were found to be significant in explaining the differences in job satisfaction. Gender which was found to be the most influential independent variable in explaining differences in the income level, was not found in the multiple regression of job satisfaction.

Here we may then conclude that females, similar to their male counterparts, were equally satisfied in their jobs, in spite for the fact that female graduates earned a lot less than the male graduates. Females who are traditionally not the bread winners may have different expectations toward job satisfaction. The ability to play the wife/mother role satisfactorily may be more important than the income itself. Predictable office hours may become the criteria that is sought by the female graduates. This could be seen indirectly, since 34% of female graduates worked in the public sector as compared to only 18% among the male graduates. Public sector operates with almost fixed single shift working hours. At the same time it is also true that the early years of employment in the public sector is not as competitive as in the private sector. Female

graduates may prefer the non-competitive environment in order to satisfactorily carry out their wife/mother role.

Job duration, academic major, employers ownership and overall English proficiency which were found to be significant in explaining the differences of income level were not found to be significant in explaining differences of job satisfaction.

One may conclude that the graduates' job satisfaction does not depend on duration of employment, the major of study, the employer's ownership and overall proficiency in English. Furthermore, in line with the previous works (eg. Kallur 1990) the research indicated that foreign trained graduates are equally satisfied in their jobs as their colleagues from the local institutions.

Personality trait represented by self-esteem and specific self-esteem (degree of comfort in meeting people) were found to be significant in explaining job satisfaction. We may conclude that persons that rated themselves highly are likely to be happy to what they are doing and hence satisfied in their jobs. This is very much in agreement with the previous works, eg. Tharenou (1979) in his review of literature of employee self-esteem reported that job satisfaction (overall, intrinsic and extrinsic) has been found to be positively correlated (.20 to .50) with global self-esteem.

Income itself was found to be significant in explaining the differences in job satisfaction. This is very much expected since one cannot dissociate job satisfaction with the monetary rewards in the employment.

One variable that was used to measure the quality of the university indirectly was the measure of satisfaction with university facilities. This research indicated that graduates who were satisfied with university facilities were happy in their jobs to a large extent. Perhaps the measure of satisfaction with university's facilities has to do with some form of personality trait. We may suspect that a person who was satisfied with his/her academic environment may also likely to be satisfied with his/her working environment.

The most influential variable that explained the differences of job satisfaction is "job fit index" ( $R^2$  change = 0.1568). Job Fit Index that measured whether the status of the job is commensurate with the qualification, whether the job made use of the skill acquired and whether the job is related to the field of study has relevant elements to explain the job satisfaction index. One can conclude that graduates who landed in the jobs that contain those elements or of very high "job fit index" were likely to be satisfied in their jobs. In other words graduates who feel that their effort in the universities are appreciated in their current jobs and were able to perform the skill they acquired were likely to have a high degree of job satisfaction. However, the measure of job fit index has its shortcoming that it did not clearly establish the link between skills learned in the major and those required on the job.

## 6.12 DISCUSSION OF POLICY IMPLICATION OF RESEARCH, FINDINGS

Between college effects, i.e., location of study when measured together with other independent variables was not significant enough to explain the differences in income level. This led to a prospective policy implication, whether it is worthwhile to spend a great sum of money sending students abroad to obtain undergraduates qualifications. In spite of previous findings not only in Malaysia (Kiong, 1986) but also in other developing countries (Blaugh 1970, Pang & Clark 1970 etc, see chapter II) that gave premium to qualification from western universities, this research indicated when measured together with other variables, the early employment outcomes in term of income and job satisfaction are independent of location of study. Perhaps the conditions in which the earlier studies were made may have changed. Furthermore this study was conducted in a period of rapid economic expansion where graduates either locally or foreign trained are highly in demand .

Admittedly, this research is only a cross-sectional study, whereby the findings may change over a time period. A longitudinal research strategy may reveal different result, especially the potential of foreign trained graduates to possess better communication skill, exposure to international environment and extra-curricular activities and of higher self-esteem is realised. As far as basing the conclusion on these cross sectional findings, it may lead to drastic policy implications and implementations. Perhaps it is wise for the decision maker to review the current policy of sending a large number of student abroad (about 30% or over 50,000 Malaysian students abroad are sponsored by the government). The foreign exchange savings could be used not only to build more universities in the country but



also to make improvements on the existing institutions. Changes must be made to address the shortcoming of local graduates in term of their experiences in the university (e.g. lack of involvement in extra curricular activities) and in general, the curricula have to be constantly improved. Perhaps University Act 1974 which was thought to discourage students activities should be repealed when a new Education Act is introduced in December 1995. The government recently announced (New Straits Time, November 18, 1995) that by 1996 foreign universities could set up their branches in this country so as to allow them to play active roles in producing graduates. At the same time local institutions may emulate the strong points of the foreign university's system.

The policy to stop sending students abroad is however to be done in phases so as not to put pressure for places in the local institutions. To locate/ or replace 17,000 places of government scholars abroad in the local institutions would be an impossible task especially if it is to be done in a short period. To make matters worse the country is in the bad shape as far as producing skilled manpower is concerned.

Table 6.14 : Technology Manpower Projections, 2000-2020

| Occupation                    | Expected Stock 1995 | Gross Requirements 2020 | Gross Supply 2020 | Demand minus Supply Gap 2000-2020 | Additional Annual Increase 2000-2020 |
|-------------------------------|---------------------|-------------------------|-------------------|-----------------------------------|--------------------------------------|
| R&D Scientists & Technologies | 22,000              | 112,000                 | 82,000            | 30,000                            | 1,500+                               |
| Engineers                     | 110,000             | 560,000                 | 304,000           | 256,000                           | 12,800                               |
| Skilled                       | 550,000             | 2,800,000               | 1,550,000         | 1,250,000                         | 62,500                               |
| Semi skilled                  | 1,650,000           | 8,400,000               | 3,260,000         | 5,140,000                         | 256,000                              |

Source : Made in Malaysia : Technology Development for Vision 2020 UNDP/World Bank Report. Submitted to the Government of Malaysia, September 1995

The data in Table 6.14 and Table 1.00 in Chapter I showed how immense is the task to produce graduates especially in the technical and scientific fields. The finding of the research could lead to the policy of not sending students abroad to do soft-pure majors. For other major, this policy is to be implemented gradually and if necessary to substitute this number by increasing the number of post-graduate students in order to benefit the acquisition of the latest knowledge especially in the areas of science and technology. The above policy is cost effective and could address the acute shortage of R&D scientists and technologies.

On the surface, or from the investment point of view, the result may support the idea of not sponsoring female students. But the economically sound decision may not be suitable politically and socially and without active government intervention the gap between sexes in term of employment attainment may widen.

As discussed previously, those students majoring in hard-applied subjects earned better compared to the other majors. In the Malaysian context, not only do they appear to have the necessary skills to perform the jobs, at least in the eyes of employers, but at the same time market forces that required a lot of this type of graduates may have to augment their employment rewards. The policy implication of this finding is very obvious, i.e., the arduous tasks of adjusting the whole education system right from primary school to tertiary institutions towards science and technology become very critical and urgent. It is even more critical if the country wishes to address the imbalance of participation of females in the fields of science and technology.

It is to be reminded that however, the above policy should be applicable to sponsored students only. Malaysia operates an open economy, as such, private students are free to decide where they would like to acquire their tertiary education. Market forces will determine demand and supply of places available in local or foreign institutions.

Finally, the research findings indicated that overall English proficiency is significant albeit small ( $R^2$  change = 0.0218) in explaining the differences in income. The findings could justify the call by the government for the local institutions to use English as a medium of instruction particularly in teaching technical subjects for example engineering, computer science, etc. The proposal by the government, however, was greeted with scepticism and mixed reactions. The public was concerned that the policy would affect the development of Bahasa Malaysia as a national language which is crucial for the purpose of uniting a multi-racial country such as Malaysia (The New Straits Time, January 10, 1994 and June 23, 1995).

The policy implication of these findings is how to balance, on one hand, the extreme requirements of the need to develop Bahasa Malaysia and on the other to ensure that the local graduates are equipped with a high level of English proficiency.

## CHAPTER VII

### SUMMARY AND CONCLUSION

There are two major explanations why bachelors degrees provide a sound economic return. The first explanation is called human capital or socialisation hypothesis and the second explanation is called certification or screening hypothesis. There are evidence in past studies that support the first explanation that suggest college students earn more than the less qualified high school graduates because college provides the former with cognitive and/or personal traits that make them more attractive employees (see page 57).

There is also evidence in the past studies that supports the second hypothesis that argues college does not so much influence the cognitive and personal traits but identify those who are most likely to have such traits to begin with (see page 58). Employers can then use college education as an inexpensive screening device to select individuals who they believe possess favourable intellectual and personal traits for the highest paying position or career paths. Thus, part of the earning differential noted between college graduates and those with less education might arise because the lack of education credentials is a barrier for entry into high paying occupations.



In this research it is suggested that the application of the screening hypothesis is not conducted between college graduates and school leavers but applied more to the preferential treatment given to foreign trained graduates as oppose to their counterparts who were trained locally.

The differential in earning between graduates might also arise due to the effects of a segmented labour market where all jobs are not in a single labour market, market supply and demand of certain types of graduates and the operations of the internal labour market which favours internal recruitment rather than recruiting someone from outside which would have been more productive.

We can thus conclude that any causal link between post-secondary education and earning may be due to a combination of all the above explanations and no single hypothesis provides a completely satisfactory explanation. Adopting all the above possible explanations, the research was carried out by adopting and adopting the approach by Pascarella & Terenzini (1991), which proposed that several causes or effects influenced the outcomes of education. These affects were categorised as: between college effects, within college effects, conditional college effects and job related effects.

The impacts of education on graduates are many ranging from learning and cognitive growth, inculcation of moral values and socio-political values, intellectual orientation, socio-economic return and many others. The author decided to concentrate only on a part of socio-economic return, i.e., the employment outcomes and this is carried out by

studying the earning or income level and job satisfaction of the participants. Income was chosen to reflect the economic return of an investment in education. Job satisfaction, in spite of being an intangible measure, was selected because it is assumed that a person who is satisfied with his job is likely to be more productive than one who is not.

"In developing countries, public expenditures on higher education have been justified primarily on investment in economic growth and nation building" (Mehmet & Yip, 1986). In accepting the argument that education promotes productivity of human resources, the Malaysian government has invested a considerable amount of money (5.6 percent of GNP, reported by the New Straits Times August 31, 1992) in education and this includes higher education. The budget allocated was not only to develop human resources but also to solve the critical social problem of the nation in which the imbalance of economic level among races and the identification of races by types of employment are still prevail.

In accepting the notion that education pays, one still has to question the justification of the heavy investment in higher education. Is it justified to have more than 50,000 student studying abroad with 30% of them funded by the government? Is an expenditure of up to four times spent abroad compared to the operational cost of educating a student locally, justifiable? Is the huge foreign exchange loss borne by a developing country such as Malaysia compensated by the quality of training obtained abroad?

The objectives of the research as stated earlier were:

1. To differentiate the outcomes of education measured by level of income and job satisfaction of two cohorts of graduates who were trained locally and in foreign institutions.
2. To find out the characteristics and the profile of the two groups of graduates in term of socio-economic background, education experience and attainment and job experiences.
3. to relate different characteristics or variables of the two cohorts of graduates that may explain the differences in level of income and job satisfaction.
4. To provide recommendations concerning types of education experiences that are economically and socially commensurate with the different level of expenditures in sponsoring students in higher institutions.

These objectives were formulated to answer some of the above questions.

As reported in chapter V, foreign trained graduates earned significantly higher when compared to the income earned by their locally trained counterparts. The figures were an average yearly income of RM19459 versus RM18109. However, these figures were measured in



isolation i.e., no variable that affects the variation in income was controlled. It is a fallacy to say that the reason one graduate earned a higher income than another is solely due to the type of college the graduate attended. As far as job satisfaction is concerned, the findings indicated that the two cohorts did not differ significantly in their perception of job satisfaction.

Before isolating the variables that explained the variation in employment outcomes the research compared the different experiences of the two cohorts as specified by the second objective, beginning from their high school experiences to exploring their socio-economic background, university experiences and finally their job experiences. Both groups showed some similarities and differences. As reported earlier, the two cohorts did not differ significantly in the following characteristics: gender, major of studies, university grades, satisfaction with university facilities, effort in mastering academic subjects, college preparation, specific self esteem, duration of working experiences and job satisfaction. However, foreign trained graduates were slightly younger, have a background of higher socio-economic status, attended better high schools and earned better high school grades. It took them a shorter period to complete their degree courses; they are more active in extracurricular activities; they are perceived to have a higher self esteem and are more proficient in English. In the work environment more of them were found working in the competitive private sector with a substantial proportion working with corporation that had foreign participation, and finally as mentioned earlier most of them earned a higher income.



In examining the socio-economic background of the graduates, the research finding proved the success of social engineering implemented by the government. The educational process has succeeded in promoting social mobility among the graduates. On comparing the graduates' educational and employment attainment to their parents' attainment, the mobility of the graduates superceded the parents. This finding indicated that the investment in education has invariably succeeded in raising the economic level of the economically disadvantaged Bumiputera and hence reducing the economic imbalance among races in Malaysia.

The research however indicated that the process of awarding the coveted scholarship to study abroad was not perfect. It was slightly regressive since on average the parents of foreign trained graduates were slightly better off in the socio-economic status than parents of the locally trained graduates. The selection of scholars based on merit, as reported in other countries always favour the already advantaged groups.

The finding also indicated that the investment in higher education has to a certain extent succeeded in addressing the social issue of identification of races in Malaysia by occupation. The majority of graduates surveyed were found to be employed in the private sector, i.e., the sector which was once predominantly dominated by the Chinese and foreign investors.

The third objective of this research was to determine the relationship between the measures of early employment outcomes i.e., income level and job satisfaction respectively with a score of independent vari-



ates, and replacing them with post graduates students, particularly in science and technology has been suggested as a feasible solution. This policy will not put too much pressures for of places in the local institution and at the same time the policy will ensure the acquisition of the latest technology from the Western institutions.

If one would adopt the finding of the regression equation of income level, female students should not be sent to very costly universities abroad. After all, the finding indicated that female graduates earned only 78.4% of what male graduates earned per year. However, it is obvious that an economically feasible solution may not be socially acceptable. Any deliberate policy to discourage participation of women in education will only increase the earning gap as reported in this research.

The findings showed that the variation of income level was influenced by majors of study. Premium of income was accorded to hard-applied majors, which in this case includes all engineering and computer sciences major. In a way, this finding in a way was similar to those discovered in the western countries. In the Malaysian context, the market demand for graduates majoring in hard-applied subjects is very high. It is projected that the current supply of graduates is not sufficient to fulfill the needs as the country is undergoing rapid industrialisation.

The finding that self-esteem influenced the variation in income may sound straightforward and obvious. However, in the author's mind, it is a complex relationship that required further investigation. After all, the perception of one's self esteem may be contributed by a series of



experiences beginning from childhood, the family socio-economic status, ability, school and university's experiences, academic achievement, employment attainment and possibly the current overall quality of life. However, the research indicated that when measured in isolation, foreign trained graduates, despite their slightly younger age, were perceived to have higher self esteem when compared to their locally trained counterparts. Their background, their exposure overseas and better English proficiency may possibly have made them confident with what they were doing which resulted in the higher self esteem.

English proficiency was one of the variables that explained the variables variation in income level. The significant implication of this finding is the importance of the language in the employment sector of the country. In Malaysia, which was formerly a British Colony, English not only flourished in the private sector but it was also an important language in the public sector particularly in the legal system.

The fact that duration of employment indicates the preference of employers for workers with experience. To a certain extent, this explains the scenario of the internal labour market, in which a candidate for a particular position is conveniently selected from an internal pool even though a better candidate may be available from an open market.

Finally, ownership of the employer influenced the variation of income level. The graduates who worked with corporations that had for-



eign participation earned a higher income. The implication of this finding could be looked in many ways. The graduates themselves who strongly believed in their cognitive and affective skills may seek highly competitive jobs by working with organisation with foreign participation. The organisation themselves may apply the screening hypothesis that relied on certain credentials to act as a screening device in differentiating between productive and non-productive employees. The perception of higher premium for foreign qualification or qualifications of hard applied majors may encourage these organisations to recruit more of these type of graduates.

At this juncture it is appropriate to requote Smart (1988) who states "... clearly the income level of college graduates is a function of a complex series of events that encompass their attributes at the time of college entry, the kinds of college and universities they attended, their experiences in those institutions, the nature of organisation in which they are employed and the characteristics of their jobs..." p (57).

The findings indicated that the variation of job satisfaction is significantly explained by the following variables: job fit index, global self esteem, specific self esteem, income level and satisfaction with university's facilities. See Figure 7.01. Specific self esteem which is associated with the degree of comfort one feels when one meets people, especially new people, described one's social self confidence. The research indicated that persons who rated themselves highly and were satisfied in their academic environment were likely to be happy with what they were doing and were hence satisfied in their jobs.

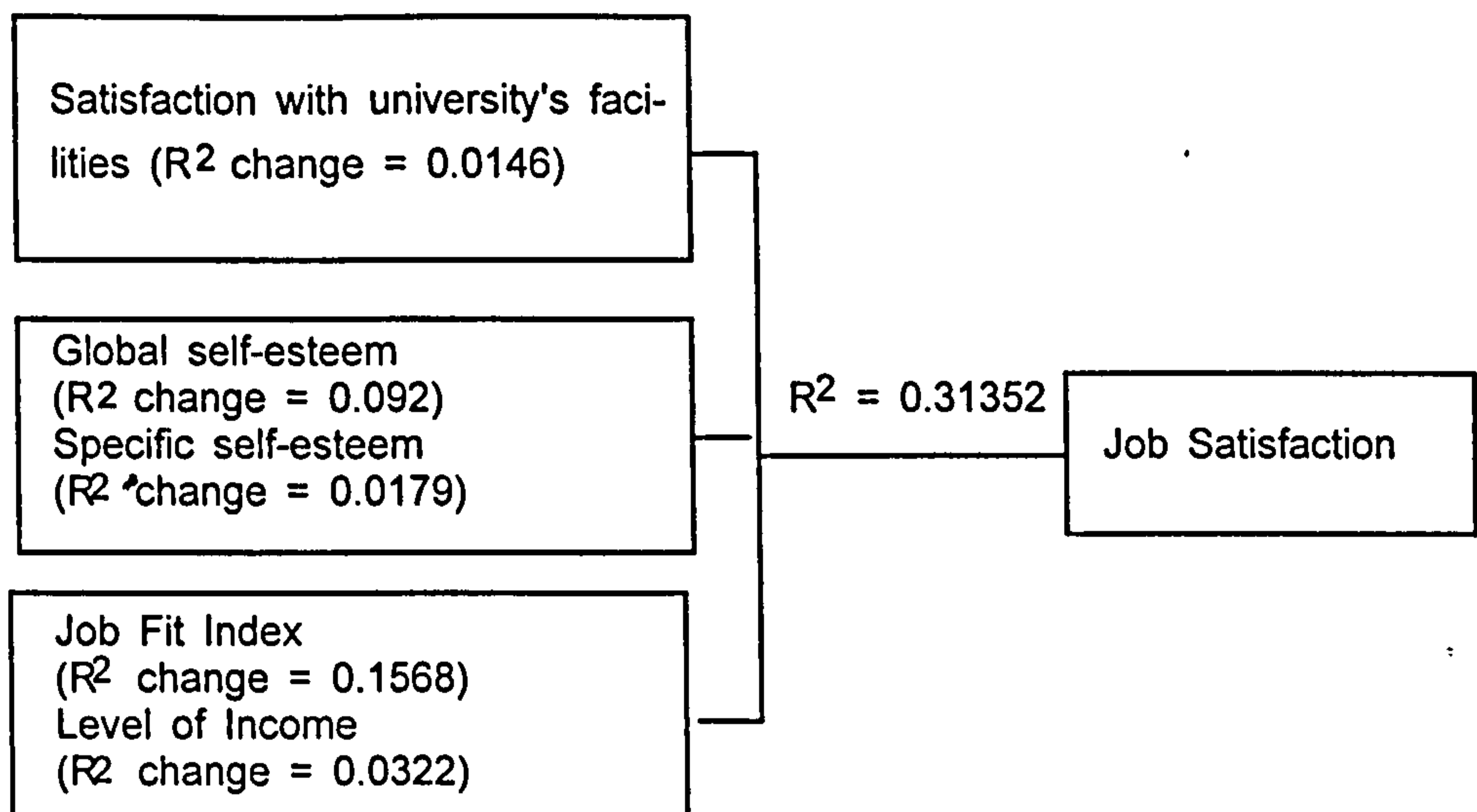


Figure 7.01: Revised Relationship Between Job Satisfaction and Independent Variables (showing relative Magnitude of Contribution of each Independent variable to differences in Jobs Satisfaction)

As expected, income or monetary reward was found to be significant in explaining the differences in job satisfaction. However, it is interesting to note that female graduates, in spite of earning an average of 78.45 of their male counterpart seemed to be equally satisfied in their jobs. The traditional role as a wife/mother may make them seek less competitive jobs. Usually their jobs come with less pay and in many cases, female graduates chose to work in the public sector (see Table 6.06 page 211 and Table 6.08 page 214) which in the early stages of employment allowed them to have more time to assume their traditional roles of wife and mother. However, it is better to remind us again, in spite of the preference of women for public sector job, the first regression analysis (see Figure 6.01 page 206) has already taken into consideration the effect of employer's ownership to the variation of income.

The fact that women earned less in this study is most like due to the effect of being "women" itself.

Job fit index which measured whether the status of the job (the pay, position etc.) is commensurate with the qualification, whether the job made use of the skill acquired and whether the job is related to the field of study, strongly explained the differences in the level of job satisfaction. However, it must be reminded that this strong relationship only occurred quite early in the respondents' career; before one may have been lured from a major-related job by better opportunities (Ochsner & Solomon, 1979).

This study has helped towards understanding the early employment outcomes of the two cohorts of graduates which on reflection may be able to help the policy makers in making a better investment decision in higher education. To potential university students in Malaysia and to a certain extent students in other developing countries, it may also help them to chart their academic career especially if they have in their mind the academic planning is for the purpose of charting their future career. Knowing what variables that explain the variation of income level and job satisfaction may help them in certain ways as to what they should be doing on entering universities and on choosing the employment or employers.

## **7.1 POLICY IMPLICATION**

1. There is a need to review the policy of sending a large number



of students to do undergraduate courses in western academic institutions. It has been suggested that the number of soft pure undergraduate majors gradually phased out could be replaced by sending postgraduate students instead, particularly in sciences and technology majors. As a consequence, the number of local institutions (public or private) would have to be increased.

2. The effort to expand the sciences and technology educational bases has to be increased substantially especially among the female students.
3. There is a need to study the suitability of University Act 1974 in the local institutions, especially its impact by students' involvement in extracurricular activities.
4. To study the possibility of increasing the rate of production of graduates by shortening the duration of study either at the school and/or university levels. The study should include the possibility of greater involvement by private sectors in post university training. The mechanism of tax exemption and collection of levy for existing human resource development fund could be expanded to facilitate specific skill training. In doing so, job fit index and job satisfaction may be increased and hence result in greater productivity.
5. To improve the teaching and learning of English at school and university level.



## 7.2 CONCLUSION

### Benefits of Higher Education

As much as expenditure on education pays, the indirect benefits of education are just as important. The data in this study may suggest the possibility of the spillover from higher income gain by the graduate that would benefit their underprivileged parents and also their offspring or future generations. From the national point of view higher education provides a mechanism for discovering and cultivating potential talents and provides an environment that stimulates research in science and technology to ensure future progress and continuous improvement of the quality of human's life.

While it is true that the early impact of college will not explain the entire career of graduates, it does explain, to a certain degree, some pertinent aspects. A college degree will continue to provide advantages throughout one's working life. These are realised through enhanced earnings, an increased likelihood of stable employment, and generally higher levels of career mobility and attainment. Indeed, a high income will allow the individuals to acquire a variety of material and non material advantages (including books, travel, cultural experiences, additional education etc.) that have a potential impact on other long term outcomes such as aesthetic, cultural, and intellectual values, maturity etc. This will encourage lawful behaviour and it will foster political stability by developing an informed electorate and competent political leadership.

Furthermore, high paying jobs are characterised by a relatively high level of social interaction and self-direction. Such job traits may provide an important continuing influence on trends in cognitive and psychological change that have been partially shaped during the college experience (Pascarella & Terenzini, 1991).

Although most of the indirect benefits of higher education could not be quantified, they are still very important. Surely when we invest to improve the quality of human life in particular and the nations in general, we are expecting more than monetary return or material gains. After all there are more to life than the economic benefits.

The research has identified the variables that explained the differences in early employment outcomes from the point of view of level of income and job satisfaction. The employment attainments of the graduates were achieved through and by a large investment in higher education by the government. Consequently it was necessary that the research identified the policies that would be suitable in order to ensure a high return of this investment not only in term of its economic benefits but also other direct or indirect qualitative benefits.

### **7.3 SUGGESTIONS FOR FURTHER STUDY**

To ensure comprehensiveness of matters related to this thesis, the author would like to suggest the following items for further study:

1. To do a longitudinal or follow up study on the graduates after ten years of graduation to see if the finding is still persistent or otherwise and to investigate the early job effects on the graduates' employment attainments. However, this suggestion is not without difficulty when considering the long waiting time to complete the study and the enormous task tracing the graduates in ten year's time.
2. To carry out a similar study that include race as one of the independent variables. It may be useful to find out whether the private students who finance their own education will exhibit similar findings.
3. Since the government is also sponsoring a large number of students to study in universities in Japan and South Korea, it would be useful to compare these graduates under similar research conditions against locally trained graduates and against students who were trained in western academic institutions.
4. To monitor the quality of future graduates in terms of early employment outcomes, should the government agree to the suggestion to reduce by one (1) year the duration of study in the local universities.
5. To carry a similar study among employers in order to investigate their perception of the two cohorts of graduates and to seek their opinion on what constitute productive graduates.



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## APPENDIXES



**APPENDIX A**

**Panel of Experts**

## APPENDIX A

### Panel of Experts

1. Dr. Robert Ball  
Senior Lecturer  
School of Management, Stirling University  
Scotland.
2. Dr. Janet L. Henderson  
Associate Professor  
Department of Agricultural Education  
Ohio State University, USA.
3. Dr. Zakaria Kasa  
Faculty of Education  
University Pertanian Malaysia.

**APPENDIX B**  
**Questionnaires**

*EMPLOYMENT OUTCOMES SURVEY OF GRADUATES  
OF TERTIARY INSTITUTIONS*



October 1992



**EMPLOYMENT OUTCOMES SURVEY  
OF GRADUATES OF TERTIARY INSTITUTIONS**

**SECTION A**

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This section is to be completed by everyone.

Questions are divided into six (6) subsections:

1. Current Information
2. Childhood and High School Information
3. Family Information
4. University Experience
5. Extra-curricular Activities
6. Self Perceived Information

**A1 - CURRENT INFORMATION**

Q1. What is your current occupation or primary activity? Please circle only one.

1. Fulltime employment including on probation, self-employment (working 40 hours or more per week)
2. Part-time employment (working 39 hours or less per week)
3. Continuing formal education
4. Full-time homemaker
5. Unemployed and actively seeking employment
6. Unemployed and not seeking employment but plan to within 6 months
7. Unemployed and do not plan to seek employment
8. Others, please specify \_\_\_\_\_

Q2. What was your age on your last birthday? \_\_\_\_\_

Q3. What is your gender?

\_\_\_\_\_ Male  
\_\_\_\_\_ Female

Q4. Marital Status?

\_\_\_\_\_ Single  
\_\_\_\_\_ Married

**A2 - CHILDHOOD AND HIGH SCHOOL INFORMATION**

Q1. Where did you spend your longest time during childhood and teenage years? Please check appropriate columns.

| Childhood   |            |       | Teenage  |            |       |
|---|------------|-------|----------|------------|-------|
| Big Town  | Small Town | Rural | Big Town | Small Town | Rural |
| _____   | _____      | _____ | _____    | _____      | _____ |
| (specify: eg. Felda scheme, village, town and in which state) |            |       |          |            |       |
| -----   |            |       |          |            |       |

Q2. In which school did you sit for SPM? \_\_\_\_\_

Q3. Did you ever stay in the hostel at that school? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, for how many years? \_\_\_\_\_

Q4. Please fill in the particulars concerning your SPM grades:  
 SPM grade; \_\_\_\_\_ one \_\_\_\_\_ two \_\_\_\_\_ three

What is the aggregate of the best five subjects in SPM? \_\_\_\_\_ points  
 What is the grade for : English communication? \_\_\_\_\_  
 English 1119? \_\_\_\_\_

**A3 - FAMILY INFORMATION**

Q1. What is the highest educational level did your father, mother or other primary guardian received? Please check  appropriate column:

|  | Father | Mother | Guardian |
|--|--------|--------|----------|
| a) holds university degree                     | _____  | _____  | _____    |
| b) completed non-university tertiary education | _____  | _____  | _____    |
| c) completed form six or equivalent            | _____  | _____  | _____    |
| d) completed form five or equivalent           | _____  | _____  | _____    |
| e) completed form three or equivalent          | _____  | _____  | _____    |
| f) some primary school                         | _____  | _____  | _____    |
| g) village religious school                    | _____  | _____  | _____    |
| h) no formal schooling                         | _____  | _____  | _____    |

Q2. Please specify the occupation of your parents or guardian:

| Father | Mother | Guardian |
|--------|--------|----------|
| _____  | _____  | _____    |

If they are retired or deceased, please specify their last occupation:

| Father | Mother | Guardian |
|--------|--------|----------|
| _____  | _____  | _____    |

Q3. Referring to Q2 please state the type of employer:

|          | Government sector | Statutory/ semi-govt. | private firm | self employed |
|----------|-------------------|-----------------------|--------------|---------------|
| Father   | _____             | _____                 | _____        | _____         |
| Mother   | _____             | _____                 | _____        | _____         |
| Guardian | _____             | _____                 | _____        | _____         |

Q4. Indicate below how much is the average monthly income from employment of your parents or guardian:

|               | Father | Mother | Guardian |
|---------------|--------|--------|----------|
| Below M\$375  | -----  | -----  | -----    |
| 375 - 600     | -----  | -----  | -----    |
| 601 - 1,000   | -----  | -----  | -----    |
| 1,001 - 1,500 | -----  | -----  | -----    |
| 1,501 - 2,000 | -----  | -----  | -----    |
| 2,001 - 3,000 | -----  | -----  | -----    |
| Above 3,000   | -----  | -----  | -----    |

Q5. Putting all the income together (inclusive of monthly income, contribution from other family members, dividends, rental, pension, etc) please state below the **TOTAL YEARLY FAMILY INCOME** before tax of your parents or guardian and circle one: (please try to be as accurate as possible)

- a) below M\$4,500
- b) 4,501 - 7,200
- c) 7,201 - 12,000
- d) 12,001 - 18,000
- e) 18,001 - 24,000
- f) 24,001 - 36,000
- g) Above 36,000

**A4 - UNIVERSITY EXPERIENCES**

Q1. Please state the location of study after SPM (post SPM) and before starting your proper university studies (e.g. High School, Pusat Matrikulasi, PPP/ITM or used to be called KPP/ITM, etc.)

-----

Date of entry to that institution : Month \_\_\_\_\_ Year \_\_\_\_\_

Q2. Programme(s) you graduated from PPP/ITM or equivalent institution: (e.g. STPM, Sijil Matrikulasi, Diploma ITM, MUCIA, A-Level, NCUK, TIEC, SAM, etc)

-----

Your major at the Institution: \_\_\_\_\_

Q3. Time to complete your studies in the above institution: Month \_\_\_\_\_ Year \_\_\_\_\_

Q4. Please state the total number of years of studies overseas or locally to complete:

1st degree/Advancde Diploma : Years \_\_\_\_\_ Months \_\_\_\_\_  
 2nd degree : Years \_\_\_\_\_ Months \_\_\_\_\_



- Q5. Date of returning to Malaysia (if you have studied overseas) or date of completing your degree/Advanced Diploma : Month \_\_\_\_\_ Year \_\_\_\_\_
- Q6. a) First degree/Advanced Diploma received : \_\_\_\_\_  
 B.A./B.Sc./B.Eng./ etc.  
 Name of university : \_\_\_\_\_  
 Class : \_\_\_\_\_ (e.g. 2nd upper in UK) or  
 CGPA : \_\_\_\_\_ out of 4 or 5 or 6
- b) Your major : \_\_\_\_\_
- Q7. 2nd. degree received if any : \_\_\_\_\_
- a) Name of university and from what country : \_\_\_\_\_  
 \_\_\_\_\_  
 Class/(CGPA/4 or 5 or 6) : \_\_\_\_\_ (if relevant)
- b) Area of specialization : \_\_\_\_\_
- Q8. Did you ever change major?  
 YES \_\_\_\_\_ NO \_\_\_\_\_ (If YES please indicate below)
- at post SPM institution: from \_\_\_\_\_ to \_\_\_\_\_
- at university : from \_\_\_\_\_ to \_\_\_\_\_
- Q9. Is the major you completed, the one you really wanted?  
 YES \_\_\_\_\_ NO \_\_\_\_\_ (If YES go to [a] if NO go to [b] )
- a) If YES, choose the most important factor which prompted you to take this major (please  $\checkmark$  one factor)
- \_\_\_\_\_ the course promised good employment opportunity  
 \_\_\_\_\_ the course gives a wide choice of future career  
 \_\_\_\_\_ the course gives social prestige  
 \_\_\_\_\_ I am good at and doing well in examination  
 \_\_\_\_\_ the only course that I could barely pass in exam  
 \_\_\_\_\_ influenced by my friends  
 \_\_\_\_\_ influenced by members of family and relatives  
 \_\_\_\_\_ others (please specify) \_\_\_\_\_
- b) If NO, what is the most important factor that prompted you to choose this major. (please  $\checkmark$  one factor)
- \_\_\_\_\_ request to change major denied  
 \_\_\_\_\_ preferred by parents or family  
 \_\_\_\_\_ past academic performance for preferred major unsatisfactory  
 \_\_\_\_\_ the only major that I could do well in examination  
 \_\_\_\_\_ the only major that I could barely pass the exam  
 \_\_\_\_\_ simply changed my mind  
 \_\_\_\_\_ assigned by the sponsor in order to get the scholarship  
 \_\_\_\_\_ others (please specify) \_\_\_\_\_



Q10. How satisfactory were you with each of the following? Please rate each topic's satisfaction to you by circling one of the numbers following each topic. Here is an example:

|                  | Very Dissatisfied |   |   | Very Satisfied |   |
|------------------|-------------------|---|---|----------------|---|
|                  | 1                 | 2 | 3 | 4              | 5 |
| Library facility |                   |   |   |                | 5 |

By circling 5, this individual indicates that he/she was very satisfied with the library facility.

Please rate your satisfaction by circling the following:

|     |  |   |   |   |   |   |
|-----|--|---|---|---|---|---|
| i   | the quality of instruction in your major field/programme | 1 | 2 | 3 | 4 | 5 |
| ii  | The overall quality of instruction                       | 1 | 2 | 3 | 4 | 5 |
| iii | The quality of academic advising                         | 1 | 2 | 3 | 4 | 5 |
| iv  | The quality of career guidance and counselling           | 1 | 2 | 3 | 4 | 5 |
| v   | The quality of job placement service                     | 1 | 2 | 3 | 4 | 5 |

Q11. To be successful in the university education, one requires among other things the individual effort and contribution to master the academic subjects. How do you assess your own effort and contribution in mastering academic subjects? (Please circle one)

- i) Too little
- ii) Not enough
- iii) Just enough
- iv) More than enough
- v) A lot

Q12. Has your university education helped you to develop any of these aspects of your life? Please ✓ the relevant column:

|                          | very little | little | somewhat | much  | very much |
|--------------------------|-------------|--------|----------|-------|-----------|
| intellectual             | _____       | _____  | _____    | _____ | _____     |
| emotional                | _____       | _____  | _____    | _____ | _____     |
| aesthetic                | _____       | _____  | _____    | _____ | _____     |
| awareness                | _____       | _____  | _____    | _____ | _____     |
| moral & religious values | _____       | _____  | _____    | _____ | _____     |
| career training          | _____       | _____  | _____    | _____ | _____     |

Q13. What is the highest level of education you expect to complete in your lifetime? Please circle one.

- 1. Bachelors degree
- 2. Masters degree
- 3. Ph.D.
- 4. Others (specify) \_\_\_\_\_

**A5 - EXTRA-CURRICULAR ACTIVITIES**

**Q1.** Please list all the societies/clubs/associations/committees/organisations/groups/professional affiliations which you were a member of during college and the position you held. Please indicate whether these activities were carried out when you were at Post SPM institution (circle P) or at your university (circle U).

| Affiliations                   | Position              |
|--------------------------------|-----------------------|
| e.g. Malaysian Students Assoc. | Ordinary member P / U |
| American Psychological Assoc.  | Student member P / U  |
| i) _____                       | _____                 |
| ii) _____                      | _____                 |
| iii) _____                     | _____                 |

**Q2.** Please list any employment you had while studying and the type of job. Please indicate whether these activities were carried out when you were at Post SPM or equivalent institution (circle P) or at your university (circle U).

| Place of Employment       | Job Designation | P / U |
|---------------------------|-----------------|-------|
| e.g. University Cafeteria | Maintenance     | P / U |
| i) _____                  | _____           |       |
| ii) _____                 | _____           |       |
| iii) _____                | _____           |       |

**Q3.** Did you take any formal course or read book(s) on how to write a resume or curricular vitae? YES \_\_\_\_\_ NO \_\_\_\_\_

**Q4.** Did you take any formal course or read book(s) on how to face a job interview? YES \_\_\_\_\_ NO \_\_\_\_\_

**A6 - PERCEIVED SELF INFORMATION**

This section refers to items describing yourself as a person and your perceived ability in English proficiency. It is important that you try to answer each question frankly and honestly.

**Q1.** Please indicate the extent to which you agree or disagree with each statements.

- If you Firmly Disagree with the statement, circle FD
- If you Disagree with the statement, circle D
- If you Slightly Disagree with the statement, circle SD
- If you Slightly Agree with the statement, circle SA
- If you Agree with the statement, circle A
- If you Firmly Agree with the statement, circle FA



Read each statement carefully and circle your response as shown in the example.

|                      |                   |
|----------------------|-------------------|
| Strongly<br>Disagree | Strongly<br>Agree |
|----------------------|-------------------|

e.g. I feel I am a successful person.    FD    D    **SD**    SA    A    FA

By circling SD, the respondent slightly disagree with the statement describing himself/herself as a successful person.

Please complete the following by circling one scale best describe about yourself.

|   |   |    |   |    |    |   |    |
|---|---|----|---|----|----|---|----|
| a | I feel that I am a person of worth, at least on an equal plane with others. | FD | D | SD | SA | A | FA |
| b | I feel that I have a number of good qualities.                              | FD | D | SD | SA | A | FA |
| c | All in all, I am inclined to feel that I am a failure.                      | FD | D | SD | SA | S | FA |
| d | I am able to do things as well as others.                                   | FD | D | SD | SA | S | FA |
| e | I feel I do not have much to be proud of                                    | FD | D | SD | SA | S | FA |
| f | I take positive attitude towards myself                                     | FD | D | SD | SA | S | FA |
| g | On the whole, I am satisfied with myself                                    | FD | D | SD | SA | S | FA |
| h | I wish I could have more respect for myself                                 | FD | D | SD | SA | S | FA |
| i | I certainly feel useless at times   | FD | D | SD | SA | S | FA |
| j | At times I think I am no good at all  | FD | D | SD | SA | S | FA |

Q2. Please complete the following items by using the following scale. WRITE:

- 1 if the statement describe you very often.
- 2 if the statement describe you fairly often.
- 3 if the statement describe you sometimes.
- 4 if the statement describe you once in a great while.
- 5 if the statement describe you practically never.

1. When you talk in front of a class or group of people your own age, how often do you feel worried or afraid? \_\_\_\_\_
2. How often do you feel that you have handled yourself well at a social gathering? \_\_\_\_\_
3. How often are you comfortable when starting conversation with people you don't know? \_\_\_\_\_
4. How often do you feel self-conscious? \_\_\_\_\_
5. How often are you troubled with shyness? \_\_\_\_\_
6. How often do you feel sure of yourself when among strangers? \_\_\_\_\_
7. How often do you worry about how well you get along with other people?  
\_\_\_\_\_

Q3. Please rate how important and how proficient the following English language skills are to your academic and career success. Please try to assess your ability at the period towards the end of your university education and in your present job by circling the appropriate numbers.

| Academic English Proficiency                                      |   | Importance to Success |          |      |     |          | Self-rated proficiency |   |   |   |   |
|---|---|-----------------------|----------|------|-----|----------|------------------------|---|---|---|---|
|   |   | Low                   | Moderate | High | Low | Moderate | High                   |   |   |   |   |
|   |   | (circle your answer)  |          |      |     |          | (circle your answer)   |   |   |   |   |
| a   | Basic English proficiency (e.g. vocabulary, grammar)  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| b   | Field-specific English skills (i.e. language in one's field)  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| c   | Listening comprehension (e.g. in lectures and discussion)   | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| d   | Speaking ability (e.g. class discussion and presentation)   | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| e   | Reading comprehension (e.g. texts, journal articles)  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| f   | Writing ability (e.g. reports and papers)   | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| g   | Reading speed   | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| h   | Writing under time pressure   | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| i   | Field-specific writing conventions and scientific styles  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| j   | Communication skills with professors and fellow students  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| k   | Note taking skills  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| l   | Knowledge of cultural aspects of English language   | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| General English Proficiency; using English to perform current job |   | Importance to Success |          |      |     |          | Self-rated proficiency |   |   |   |   |
|   |   | Low                   | Medium   | High | Low | Medium   | High                   |   |   |   |   |
|   |   | (circle your answer)  |          |      |     |          | (circle your answer)   |   |   |   |   |
| a   | Take part in social interaction (e.g. conduct polite conversation, give opinions on general subjects)                       | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| b   | Travel and visit places of interest (e.g. ask for directions to a location, book tickets and ask for information)           | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| c   | Shop and use services (e.g. discuss services or goods required, make spoken or written complaints)                          | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| d   | Obtain medical attention and health services (e.g. explain symptoms of illness or injury, read medical forms and documents) | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| e   | Eat and drink in public places (e.g. read menu, read orders)  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| f   | Use media for entertainment and information (e.g. TV, radio)  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| g   | Conduct personal and business correspondence (e.g. write personal and business letters, resume)                             | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |
| h   | Deal with officials (e.g. read forms and instructions, argue or explain cases face-to-face with officials)                  | 1                     | 2        | 3    | 4   | 5        | 1                      | 2 | 3 | 4 | 5 |

THANK YOU FOR COMPLETING SECTION A





Q4. Is the current firm/organisation you are now working: (please circle one) is an entity of in the

- i) federal government
- ii) state government
- iii) local government
- iv) government-controlled corporation
- v) private corporation
- vi) private partnership
- vii) private single proprietorship
- viii) own self business
- ix) non-profit organization
- x) other: please specify \_\_\_\_\_

Q5. Is the firm/organisation you are working now is a joint venture with a foreign company? Please circle one. YES/NO

If YES state the country of the foreign partner. Country \_\_\_\_\_

Q6. What is the approximate number of employee in your firm/organisation?  
\_\_\_\_\_ employees.

Q7. What is the race of : (please circle one)

Majority of managerial staff : Bumiputera / Non-Bumiputera  
Majority of workers : Bumiputera / Non-Bumiputera

Q8. Indicate below the category most closely describing your

a) Current occupation. (Please check  $\checkmark$  one).

- \_\_\_\_\_ Professional; technical and related workers
- \_\_\_\_\_ Managers and Administrators, except farm
- \_\_\_\_\_ Sales workers
- \_\_\_\_\_ Craftsmen or craftswomen and related workers
- \_\_\_\_\_ Machine operators
- \_\_\_\_\_ Transportation equipment operators
- \_\_\_\_\_ Labourers except farm
- \_\_\_\_\_ Farmers
- \_\_\_\_\_ Farm managers
- \_\_\_\_\_ Service workers, excluding private household
- \_\_\_\_\_ Private household workers
- \_\_\_\_\_ Others, please specify \_\_\_\_\_

Please name the exact title of your present occupation  
-----

b) Industrial classification/economic sector. (Please check  $\checkmark$  one).

- \_\_\_\_\_ Agriculture, forestry, hunting and fishing
- \_\_\_\_\_ Mining and quarrying
- \_\_\_\_\_ Manufacturing
- \_\_\_\_\_ Construction
- \_\_\_\_\_ Electricity, water, gas or sanitary service
- \_\_\_\_\_ Commerce (wholesale and retail, banking, insurance and real estate)

- \_\_\_\_\_ Transport, storage and communication
- \_\_\_\_\_ Service (civil administration and defense, education, health/medicine, recreation and entertainment and other services)
- \_\_\_\_\_ Others (specify) \_\_\_\_\_

Q9. How long are your regular total working hours (excluding overtime) per week?  
 -----

Q10. What is your present average annual salary before tax deduction? (Try to be as accurate as possible and we want to reiterate that all your answers are strictly confidential).  
 M\$ \_\_\_\_\_ a year.

**PLEASE do not answer question 11 to 13 if you are not holding a full-time job.**

Q11. Does the status of your current full-time job commensurate or equitable with your qualification? Please circle one.

- a) Is not commensurate
- b) Is partly commensurate
- c) Commensurate

Q12. Does your current full-time job require levels of skills and training that you acquired in college? Please circle one.

- a) Requires no skills and training acquired at college
- b) Requires a low level of skills and training than acquired in college
- c) Requires an equivalent level of skills and training acquired in college
- d) Requires a higher level of skills and training than that acquired in college

Q13. Is your current full-time job related to your field or study? Please circle one.

- a) Not related
- b) Somewhat related
- c) Highly related

Q14. Are you employed in your major field of your study? \_\_\_\_\_ YES \_\_\_\_\_ NO. If NO, please indicate the main reason. (Circle one).

- a) Never planned to work in major field
- b) Could not find an appropriate job in my major field
- c) Developed a new career interest
- d) Could not find a job without relocating
- e) Better pay
- f) Better opportunity for advancement
- g) My field is difficult to relate to a specific job
- h) To see if I like this job
- i) I have not passed the licensing or professional exam required for my major field.
- j) Other (Please specify) \_\_\_\_\_



## B2 - JOB SATISFACTION

Please do not answer this section if you are not holding a full-time job. This section refers to items describing how much you are satisfied with your current job.

Q1. Please indicate the extent to which you agree or disagree with each statements.

If you Firmly Disagree with the statement, circle FD

If you Disagree with the statement, circle D

If you Slightly Disagree with the statement, circle SD

If you Slightly Agree with the statement, circle SA

If you Agree with the statement, circle A

If you Firmly Agree with the statement, circle FA

Read each statement and circle your response as shown in the example.

|                      |                   |
|----------------------|-------------------|
| Strongly<br>Disagree | Strongly<br>Agree |
|----------------------|-------------------|

e.g. I am satisfied with my current job.

FD D **SD** SA A FA

By circling SD, the respondent slightly disagree with the statement that he is satisfied with the current job.

Please complete the following by circling one scale that best describes the satisfaction with different aspects of your current job.

| ITEM | QUESTION   | CIRCLE YOUR ANSWER |   |    |    |   |    |
|------|--|--------------------|---|----|----|---|----|
| a    | I am satisfied with my career progress to date                     | FD                 | D | SD | SA | A | FA |
| b    | My job fits my long range goals                                    | FD                 | D | SD | SA | A | FA |
| c    | I would like to remain with my employer                            | FD                 | D | SD | SA | A | FA |
| d    | I am satisfied with the status of my position                      | FD                 | D | SD | SA | A | FA |
| e    | I am satisfied with the variety of activities of the job           | FD                 | D | SD | SA | A | FA |
| f    | I am satisfied with the challenge of the job                       | FD                 | D | SD | SA | A | FA |
| g    | My job responsibilities are too broad for one person to accomplish | FD                 | D | SD | SA | A | FA |
| h'   | I am satisfied with opportunity for creativity of the job          | FD                 | D | SD | SA | A | FA |
| i    | My skills are fully utilised                                       | FD                 | D | SD | SA | A | FA |
| j    | I am satisfied with the pay and benefits of the job                | FD                 | D | SD | SA | A | FA |
| k    | I need more resources to do my job                                 | FD                 | D | SD | SA | A | FA |
| l    | I am satisfied with the supervision                                | FD                 | D | SD | SA | A | FA |
| m    | I am satisfied with my fellow co-workers                           | FD                 | D | SD | SA | A | FA |
| n    | My job is not in agreement with my moral and spiritual values      | FD                 | D | SD | SA | A | FA |

If you have completed Sections A and B, you have finished the survey. Please return the completed booklet to us in the self-address stamped envelope provided.



**NOTE:** On the last page of this questionnaires there are spaces for written remarks. If you wish to comment on your background, educational (academic and non-academic) and job experiences and their relationships, please do so. We will be glad to have your opinions.

## SECTION C

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### CONTINUING FORMAL EDUCATION

Please complete this section **ONLY** if you marked item in **SECTION A1** on **CURRENT INFORMATION** that your primary current activity is continuation of your formal education.

Q1. Indicate the degree you are currently seeking. Please check  one.

Masters     Doctorate     Professional degree  
 Others (please specify) \_\_\_\_\_

Q2. Is your present program of study in the same discipline area as your bachelor's degree? Please check  one.

YES     NO     Closely related

Q3. Name of institution you are now enrolled and the location.

University \_\_\_\_\_ Country \_\_\_\_\_

Q4. Describe how well your undergraduate education prepared you for graduate/professional school. Please check  one.

Well prepared; understand and can perform all that is expected of me  
 Adequately prepared  
 Not adequately prepared for advanced study  
 Not sure  
 Does not apply to me - not in graduate or professional school

Q5. When you completed your graduate or professional programme, where do you anticipate working? Please check  one.

Agriculture  
 College or university  
 Elementary or secondary school  
 Business  
 Government  
 Non-profit organization (other than school or government)  
 Don't know  
 Others (Please specify) \_\_\_\_\_

Q6. When you go to work after you have completed your current program or programs, which activity do you anticipate will be your primary activity? Please check  one.

Teaching     Research     Administration/Management  
 Sales     Information services     Technical services  
 Don't know     Others (Please specify) \_\_\_\_\_

Q7. Are you financing your current educational programme yourself?  
 YES     NO

If NO, which organisation is sponsoring your current educational program?

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### THANK YOU FOR COMPLETING SECTION C

-----

If you have completed Sections A and C, you have finished the survey. Please return the completed booklet to us in the self-address stamped envelope provided.

NOTE: On the last page of this questionnaires there are spaces for written remarks. If you wish to comment on your background, educational (academic or non-academic), job experience, and your current pursuit for further formal education and their relationships, please do so. We will be glad to have your opinions and suggestions.

### SECTION D

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Please complete this section ONLY if you marked item in question 1 SECTION A1 on CURRENT INFORMATION that you are a full-time homemaker or unemployed.

#### DIRECTIONS:

Answer questions 1 - 3 if your primary current activity is **HOMEMAKER**

Answer questions 4 - 6 if your primary current activity is **UNEMPLOYED AND ACTIVELY SEEKING WORK.**

Answer questions 7 - 9 if your primary current activity is **UNEMPLOYED AND NOT SEEKING WORK BUT PLAN TO WITHIN 6 MONTHS.**

Answer questions 10 - 12 if your primary current activity is **UNEMPLOYED AND DO NOT PLAN TO SEEK EMPLOYMENT.**

**HOMEMAKERS - Please check  the following**

Q1. Since the date of your graduation, have you worked (full-time or part-time) outside the home?

Work full-time \_\_\_\_\_ Work part-time \_\_\_\_\_ Not working \_\_\_\_\_

If YES, for how long? \_\_\_\_\_  
and what is the nature of the job? \_\_\_\_\_

Q2. How long have you been a homemaker?

- \_\_\_\_\_ Less than one month
- \_\_\_\_\_ 2 - 4 months
- \_\_\_\_\_ 5 - 7 months
- \_\_\_\_\_ 7 months or more

Q3. Which of the following do you expect to pursue in the next five years? (Check  all that apply).

- \_\_\_\_\_ Continuing full-time home making and/or child rearing
- \_\_\_\_\_ Seek full-time or part-time work
- \_\_\_\_\_ Engage in further formal education
- \_\_\_\_\_ Individual pursuits (e.g. writing, painting, etc)
- \_\_\_\_\_ Others (please specify) \_\_\_\_\_

**HOMEMAKERS - you have completed our questionnaires; skip to the end of Section D.**

**UNEMPLOYED/SEEKING WORK**

Q4. Since the date of graduation, have you worked? (either full-time or part-time)?

Work full-time \_\_\_\_\_ Work part-time \_\_\_\_\_ Not working \_\_\_\_\_

If YES, for how long? \_\_\_\_\_

and what is the nature of the job? \_\_\_\_\_

Q5. How long have you been without job? How long have you been looking for work?

- Unemployed
- \_\_\_\_\_ Less than one month
  - \_\_\_\_\_ 2 - 4 months
  - \_\_\_\_\_ 5 - 7 months
  - \_\_\_\_\_ 7 months or more

- Looking for work
- \_\_\_\_\_ Less than one month
  - \_\_\_\_\_ 2 - 4 months
  - \_\_\_\_\_ 5 - 7 months
  - \_\_\_\_\_ 7 months or more



Q6. What has been the problems you've encountered while looking for work? Rank the three most serious problems listed below as 1, 2, 3.

- Lack of mobility; e.g. cannot move because of spouse's job
- Cannot find a job with desirable characteristics (location, salary, etc)
- Lack of job in my field
- Lack of experience for job(s) sought
- Lack of skills and education for the job(s) sought
- Lack of information about where and how to look for a job
- Lack of confidence in what I can do and what to do
- Over qualified, my education and skills exceeded those required for the available jobs.
- Did not pass licensing or professional exam in my field
- Physical handicap
- Racial discrimination
- Sex discrimination ( I am a male or a female)
- My appearance affected acceptance into a job (e.g. wearing tudung)  
(please sepcify) \_\_\_\_\_
- Failed very badly in job interview
- Low academic qualification
- Graduated from non prestigious university
- Poor ability to communicate in English
- Could not find a suitable firm or institution that suit my personal or religious belief
- Others (please specify) \_\_\_\_\_

UNEMPLOYED WORKERS - you have completed our questionnaires, skip to the end of SECTION D.

UNEMPLOYED/NOT SEEKING WORK BUT PLANNED TO

Q7. Since the date of graduation, have you worked? (either full-time or part-time?)

Work full-time  Work part-time  Not working

If YES, for how long? \_\_\_\_\_

and what is the nature of your job? \_\_\_\_\_

Q8. How long have you been without a job?

- Less than one month
- 2 - 4 months
- 5 - 7 months
- 7 months or more



Q9. Indicate reasons you are not currently seeking work. Please check  one.

- Health problems
- Wanted a break; do not want to work this time
- Planning to continue education
- Discouraged from past experience - do not expect to find a job
- Travel
- Lack of mobility, e.g. cannot move because of spouse's job
- Physical handicap
- Did not pass licensing or professional exam in my field
- Others (Please specify) \_\_\_\_\_

**UNEMPLOYED WORKERS PLANNING TO SEEK WORK** - You have completed our questionnaires, skip to the end of SECTION D.

### UNEMPLOYED, NOT SEEKING WORK

Q10. Since the date of graduation, have you worked? (either full-time or part-time?)

Work full-time  Work part-time  Not working

If YES, for how long? \_\_\_\_\_

and what is the nature of your job? \_\_\_\_\_

Q11. How long have you been without a job? Please circle one.

- Less than one month
- 2 - 4 months
- 5 - 7 months
- 7 months or more

Q12. Indicate the reason you do not plan to seek employment. Please check  one.

- Health problems
- Wanted a break - do not want to work at this time
- Lack of mobility - e.g. cannot move because of spouse's job
- Planning to continue education
- Discourage from past experience - do not expect to find a job
- Travel
- Lack of job in my field
- Physical handicap
- Low academic qualification
- Others (please specify) \_\_\_\_\_

**THANK YOU FOR COMPLETING SECTION D**

If you have completed SECTIONS A and D, you have finished the survey. You may add extra remarks in the last page of the questionnaires. Please return the completed booklet to us in the self-address stamped envelope provided.

Code Number: \_\_\_\_\_

### EXTRA REMARKS

Please feel free to add extra information that you think may help us to relate your background and your educational experiences (academic or non-academic) to your current occupation or major activities.

(Anda juga boleh menjawab di dalam Bahasa Malaysia sekiranya perlu).  
Terima kasih.

**APPENDIX B (1)**

**Initial Questionnaires Used in Field Work.**

***EMPLOYMENT OUTCOMES SURVEY OF GRADUATES  
OF TERTIARY INSTITUTIONS***

**August 1992**



**EMPLOYMENT OUTCOMES SURVEY  
OF GRADUATES OF TERTIARY INSTITUTIONS**

**SECTION A**

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This section is to be completed by everyone.

Questions are divided into six (6) subsections:

1. Current Information
2. Childhood and High School Information
3. Family Information
4. University Experience
5. Extra-curricular Activities
6. Self Perceived Information

**A1 CURRENT INFORMATION**

Q1. What is your current occupation or primary activity? Please circle only one.

1. Full time employment including on probation, self-employment (working 40 hours or more per week)
2. Part-time employment (working 39 hours or less per week)
3. Continuing formal education
4. Full-time homemaker
5. Unemployed and actively seeking employment
6. Unemployed and not seeking employment by plan to within 6 months
7. Unemployed and do not plan to seek employment
8. Others, please specify

Q2. What was your age on your last birthday? \_\_\_\_\_

Q3. What is your gender?  
 \_\_\_\_\_ Male  
 \_\_\_\_\_ Female

Q4. Marital Status?  
 \_\_\_\_\_ Single  
 \_\_\_\_\_ Married

**A2 - CHILDHOOD AND HIGH SCHOOL INFORMATION**

Q1. Where did you spend your longest time during childhood and teenage years? Please check appropriate columns.

| Childhood  |            |       | Teenage  |            |       |
|--|------------|-------|----------|------------|-------|
| Big Town   | Small Town | Rural | Big Town | Small Town | Rural |
| _____  | _____      | _____ | _____    | _____      | _____ |
| (specify: eg. Felda scheme , village, town and in which state) |            |       |          |            |       |
| -----  |            |       |          |            |       |

Q2. In which school did you sit for SPM? \_\_\_\_\_

Q3. Did you ever stay in the hostel at that school? Yes \_\_\_\_\_ No \_\_\_\_\_  
 If yes, for how many years?

Q4. Please fill in the particulars concerning your SPM grades:  
 SPM grade; \_\_\_\_\_ one \_\_\_\_\_ two \_\_\_\_\_ three

What is the aggregate of the best five subjects in SPM? \_\_\_\_\_ points  
 What is the grade for : English communication? \_\_\_\_\_  
 English 1119? \_\_\_\_\_

**A3 - FAMILY INFORMATION**

Q1. What is the highest educational level did your father, mother or other primary guardian received? Please check appropriate column:

|  | Father | Mother | Guardian |
|--|--------|--------|----------|
| a) holds university degree                     | -----  | -----  | -----    |
| b) completed non-university tertiary education | -----  | -----  | -----    |
| c) completed form six or equivalent            | -----  | -----  | -----    |
| d) completed form five or equivalent           | -----  | -----  | -----    |
| e) completed form three or equivalent          | -----  | -----  | -----    |
| f) some primary school                         | -----  | -----  | -----    |
| g) village religious school                    | -----  | -----  | -----    |
| h) no formal schooling                         | -----  | -----  | -----    |

Q2. Please specify the occupation of your parents or guardian:

| Father | Mother | Guardian |
|--------|--------|----------|
| -----  | -----  | -----    |

If they are retired or deceased, please specify their last occupation:

| Father | Mother | Guardian |
|--------|--------|----------|
| -----  | -----  | -----    |

Q3. Referring to Q2 please state the type of employer:

|          | Government sector | Statutory/ semi-govt. | private firm | self employed |
|----------|-------------------|-----------------------|--------------|---------------|
| Father   | -----             | -----                 | -----        | -----         |
| Mother   | -----             | -----                 | -----        | -----         |
| Guardian | -----             | -----                 | -----        | -----         |

Q4. Indicate below how much is the average monthly income from employmen of your parents or guardian:

|               | Father | Mother | Guardian |
|---------------|--------|--------|----------|
| Below M\$375  | -----  | -----  | -----    |
| 375 - 600     | -----  | -----  | -----    |
| 601 - 1,000   | -----  | -----  | -----    |
| 1,001 - 1,500 | -----  | -----  | -----    |
| 1,501 - 2,000 | -----  | -----  | -----    |
| Above 3,000   | -----  | -----  | -----    |

Q5. Putting all the income together (inclusive of monthly income, contribution from other family members, dividends, rental, pension, etc) please state below the **TOTAL YEARLY FAMILY INCOME** before tax of your parents or guardian and circle one: (please try to be as accurate as possible)

- a) below M\$4,500
- b) 4,501 - 7,200
- c) 7,201 - 12,000
- d) 12,001 - 18,000
- e) 18,001 - 24,000
- f) 24,001 - 36,000
- g) Above 36,000

Q6. What was your Total Yearly family income when you were a high school student  
M\$ \_\_\_\_\_ per year.

#### A4 UNIVERSITY EXPERIENCES

Q1. Please state the location of study after SPM (post SPM) and before starting your proper university studies (e.g. High School, Pusat Matrikulasi, PPP/ITM or used to be called KPP/ITM, etc.)

-----

Date of entry to that institution : Month \_\_\_\_\_ Year \_\_\_\_\_

Q2. Programme(s) you graduated from PPP/ITM or equivalent institution:  
(e.g. STPM, Sijil Matrikulasi, Diploma ITM, MUCIA, A-Level, NCUK, TIEC, SAM, etc)

-----

Your major at the Institution: -----

Q3. Time to complete your studies in the above institution: Month \_\_\_\_\_ Year \_\_\_\_\_

Q4. Please state the total number of years of studies overseas or locally to complete:

1st degree/Advance Diploma : Years \_\_\_\_\_ Months \_\_\_\_\_  
2nd degree : Years \_\_\_\_\_ Months \_\_\_\_\_

⋮



Q5. Date of returning to Malaysia (if you have studied overseas) or date of completing your degree/Advanced Diploma : Month \_\_\_\_\_ Year \_\_\_\_\_

Q6. a) First degree/Advanced Diploma received : \_\_\_\_\_  
B.A./B.Sc./B.Eng./ etc.

Name of university : \_\_\_\_\_

Class : \_\_\_\_\_ (e.g. 2nd upper in UK) or

CGPA : \_\_\_\_\_ out of 4 or 5 or 6

b) Your major : \_\_\_\_\_

Q7. 2nd. degree received if any : \_\_\_\_\_

a) Name of university and from what country : \_\_\_\_\_

Class/(CGPA/4 or 5 or 6) : \_\_\_\_\_ (if relevant)

b) Area of specialization : \_\_\_\_\_

Q8. Did you ever change major?

YES \_\_\_\_\_ NO \_\_\_\_\_ (if YES please indicate below)

at post SPM institution: from \_\_\_\_\_ to \_\_\_\_\_

at university : from \_\_\_\_\_ to \_\_\_\_\_

Q9. Is the major you completed, the one you really wanted?

YES \_\_\_\_\_ NO \_\_\_\_\_ (if YES go to [a] if NO go to [b])

a) If YES, choose the most important factor which prompted you to take this major (please / one factor)

\_\_\_\_\_ the course promised good employment opportunity

\_\_\_\_\_ the course gives a wide choice of future career

\_\_\_\_\_ the course gives social prestige

\_\_\_\_\_ I am good at and doing well in examination

\_\_\_\_\_ the only course that I could barely pass in exam

\_\_\_\_\_ influenced by my friends

\_\_\_\_\_ influenced by members of family and relatives

\_\_\_\_\_ others (please specify) \_\_\_\_\_

b) if NO, what is the most important factor that prompted you to choose this major. (please / one factor)

\_\_\_\_\_ request to change major

\_\_\_\_\_ preferred by parents or family

\_\_\_\_\_ past academic performance for preferred major unsatisfactory

\_\_\_\_\_ the only major that I could do well in examination

\_\_\_\_\_ the only major that I could barely pass the exam

\_\_\_\_\_ simply changed my mind

\_\_\_\_\_ assigned by the sponsor in order to get the scholarship

\_\_\_\_\_ others (please specify) \_\_\_\_\_



Q10. How satisfactory were you with each of the following? Please rate each topic's satisfaction to you by circling one of the numbers following each topic. Here is an example:

|                  | Very Dissatisfied |   |   | Very Satisfied |   |
|------------------|-------------------|---|---|----------------|---|
|                  | 1                 | 2 | 3 | 4              | 5 |
| Library facility | 1                 | 2 | 3 | 4              | 5 |

By circling 5, this individual indicates that he/she was very satisfied with the library facility.

Please rate your satisfaction by circling the following:

|     |  |   |   |   |   |   |
|-----|--|---|---|---|---|---|
| i   | of instruction in your major field /programme  | 1 | 2 | 3 | 4 | 5 |
| ii  | The overall quality of instruction             | 1 | 2 | 3 | 4 | 5 |
| iii | The quality of academic advising               | 1 | 2 | 3 | 4 | 5 |
| iv  | The quality of career guidance and counselling | 1 | 2 | 3 | 4 | 5 |
| v   | The quality of job placement service           | 1 | 2 | 3 | 4 | 5 |

Q11. To be successful in the university education, one requires among other things the individual effort and contribution to master the academic subjects. How do you assess your own effort contribution in mastering academic subjects? (Please circle one)

- i) Too little
- ii) Not enough
- iii) Just enough
- iv) More than enough
- v) A lot

Q12. Has your university education helped you to develop any of these aspects of your life? Please / the relevant column:

|                          | very little | little | somewhat | much  | very much |
|--------------------------|-------------|--------|----------|-------|-----------|
| intellectual             | _____       | _____  | _____    | _____ | _____     |
| emotional                | _____       | _____  | _____    | _____ | _____     |
| aesthetic                | _____       | _____  | _____    | _____ | _____     |
| awareness                | _____       | _____  | _____    | _____ | _____     |
| moral & religious values | _____       | _____  | _____    | _____ | _____     |
| career training          | _____       | _____  | _____    | _____ | _____     |

Q13. What is the highest level of education you expect to complete in your lifetime? Please circle one.

- 1. Bachelors degree
- 2. Masters degree
- 3. Ph.D.
- 4. Others (specify) \_\_\_\_\_

**A5 - EXTRA-CURRICULAR ACTIVITIES**

**Q1.** Please list all the societies/clubs/associations/committees/organisations/ groups/professional affiliations which you were a member of during college and the position you held. Please indicate whether these activities were carried out when you were at Post SPM institution (circle P) or at your university (circle U).

|      | Affiliations                  | Position        |       |
|------|-------------------------------|-----------------|-------|
| e.g. | Malaysian Students Assoc.     | Ordinary member | P/ U  |
|      | American Psychological Assoc. | Student member  | P / U |
|      | i) -----                      | -----           |       |
|      | i) -----                      | -----           |       |
|      | i) -----                      | -----           |       |

**Q2.** Please list any employment you had while studying and the type of job. Please indicate whether these activities were carried out when you were at Post SPM or equivalent institution (circle P) or at your university (circle U).

|      | Place of Employment  | Job Designation | P / U |
|------|----------------------|-----------------|-------|
| e.g. | University Cafeteria | Maintenance     | P / U |
|      | i) -----             | -----           |       |
|      | ii) -----            | -----           |       |
|      | ii) -----            | -----           |       |

**Q3.** Did you take any formal course or read book(s) on how to write a resume or curricular vitae? YES \_\_\_\_\_ NO \_\_\_\_\_

**Q4.** Did you take any formal course or read book(s) on how to face a job interview? YES \_\_\_\_\_ NO \_\_\_\_\_

**A6 - PERCEIVED SELF INFORMATION**

This section refers to items describing yourself as a person and your perceived ability in English proficiency. It is important that you try to answer each question frankly and honestly.

**Q1.** Please indicate the extent to which you agree or disagree with each statements.

- if you **Firmly Disagree** with the statement, circle **FD**
- If you **Disagree** with the statement, circle **D**
- If you **Slightly Disagree** with the statement, circle **S D**
- If you **Slightly Agree** with the statement, circle **SA**
- If you **Agree** with the statement, circle **A**
- If you **Firmly Agree** with the statement, circle **FA**

Read each statement carefully and circle your response as shown in the example.

Strongly Disagree                      Strongly Agree

e.g. I feel I am a successful person.                      FD    D    SD    SA    A    FA

By circling SD, the respondent slightly disagree with the statement describing himself/herself as a person.

Please complete the following by circling one scale best describe about yourself.

|   |   |    |   |    |    |   |    |
|---|---|----|---|----|----|---|----|
| a | I feel that I am a person of worth, at least on an equal plane with others. | FD | D | SD | SA | A | FA |
| b | I feel that I have a number of good qualities                               | FD | D | SD | SA | A | FA |
| c | All in all, I am inclined to feel that I am a failure                       | FD | D | SD | SA | S | FA |
| d | I am able to do things as well as others.                                   | FD | D | SD | SA | S | FA |
| e | I feel I do not have much to be proud of                                    | FD | D | SD | SA | S | FA |
| f | I take positive attitude towards myself                                     | FD | D | SD | SA | S | FA |
| g | On the whole, I am satisfied with myself                                    | FD | D | SD | SA | S | FA |
| h | I wish I could have more respect for myself                                 | FD | D | SD | SA | S | FA |
| i | I certainly feel useless at times   | FD | D | SD | SA | S | FA |
| j | At times I think I am no good at all  | FD | D | SD | SA | S | FA |

Q2. Please complete the following items by using the following scale. WRITE:

- 1 if the statement describe you very often.
- 2 if the statement describe you fairly often.
- 3 if the statement describe you sometimes.
- 4 if the statement describe you once in a great while.
- 5 if the statement describe you practically never.

1. When you talk in front of a class or group of people your own age, how often do you feel worried or afraid? \_\_\_\_\_
2. How often do you feel that you have handled yourself well at a social gathering? \_\_\_\_\_
3. How often are you comfortable when starting conversation with people you don't know? \_\_\_\_\_
4. How often do you feel self-conscious? \_\_\_\_\_
5. How often are you troubled with shyness? \_\_\_\_\_
6. How often do you feel sure of yourself when among strangers? \_\_\_\_\_
7. How often do you worry about how well you get along with other people? \_\_\_\_\_

Q3. Please rate how important and how proficient the following English language skills are to your academic and career success. Please try to assess your ability at the period towards the end of your university education and in your present job by circling the appropriate numbers.



| Academic English Proficiency   |  | Importance to Success |   |   |   |   | Self-rated proficiency |   |   |   |   |
|--|--|-----------------------|---|---|---|---|------------------------|---|---|---|---|
|  |  | Low Moderate High     |   |   |   |   | Low Moderate High      |   |   |   |   |
|  |  | (Circle your answer)  |   |   |   |   | (circle your answer)   |   |   |   |   |
| a.   | Basic English proficiency<br>(e.g. vocabulary, grammar)  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| b.   | Field-specific English skills<br>(i.e. language in one's field)  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| c.   | Listening comprehension<br>(e.g. in lectures and discussion)   | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| d.   | Speaking ability<br>(e.g. class discussion and presentation)   | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| e.   | Reading comprehension<br>(e.g. texts, journal articles)  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| f.   | Writing ability (e.g. reports and papers)  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| g.   | Reading speed  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| h.   | Writing under time pressure  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| i.   | Field-specific writing conventions and<br>scientific styles  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| j.   | Communication skills with professors<br>and fellow students  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| k.   | Note taking skills   | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| l.   | Knowledge of cultural aspects of<br>English language   | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| General English Proficiency; using<br>English to perform current job |  | Importance to Success |   |   |   |   | Self-rated proficiency |   |   |   |   |
|  |  | Low Medium High       |   |   |   |   | Low Medium High        |   |   |   |   |
|  |  | (circle your answer)  |   |   |   |   | (circle your answer)   |   |   |   |   |
| a.   | Take part in social interaction<br>(e.g. conduct polite conversation, give<br>opinions on general subjects)                          | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| b.   | Travel and visit places of interest<br>(e.g. ask for directions to a location,<br>book tickets and ask for information)              | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| c.   | Shop and use services<br>(e.g. discuss services or goods required,<br>make spoken or written complaints)                             | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| d.   | Obtain medical attention and health<br>services (e.g. explain symptoms of<br>illness or injury, read medical forms and<br>documents) | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| e.   | Eat and drink in public places   | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| f.   | Use media for entertainment and<br>information (e.g. TV, radio)  | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| g.   | Conduct personal and business<br>correspondence (e.g. write personal and<br>business letters, resume)                                | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |
| h.   | Deal with officials (e.g. read forms and<br>instructions, argue or explain cases face-<br>to-face with officials)                    | 1                     | 2 | 3 | 4 | 5 | 1                      | 2 | 3 | 4 | 5 |



**SECTION B**

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Please complete this section **ONLY** if you marked in item question 1 **SECTION A2** on **CURRENT INFORMATION** that your primary current activity is **EMPLOYMENT**. It is divided into two (2) sub-sections (1) Employment (2) Facets of Job Satisfaction.

**B1 - EMPLOYMENT INFORMATION**

Q1. Were you looking for work in private sector only? \_\_\_\_\_  
 public sector only? \_\_\_\_\_  
 either one? \_\_\_\_\_

Q2. Where did you get your first employment after graduation? appropriate answer(s).

\_\_\_\_\_ a) through the institution from which you graduated  
 \_\_\_\_\_ b) through the Ministry of Human Resources  
 \_\_\_\_\_ c) through newspaper advertisement  
 \_\_\_\_\_ d) through personal contacts with employer  
 \_\_\_\_\_ e) through assignment by your scholarship's sponsor  
 \_\_\_\_\_ f) through your friend or close family friend (please describe the job title of the friend)  
 \_\_\_\_\_ g) through relatives (please describe what relationship is this person to you, e.g. father, uncle, etc. and the job title of this person)  
 \_\_\_\_\_ h) other; please specify: \_\_\_\_\_

Q3. How important are the following factors in your getting your present job?

|  | Very important<br>(3)    | Important<br>(2)         | Not important<br>(1)     |
|--|--------------------------|--------------------------|--------------------------|
| Academic record                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Aptitude test                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interview                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Past experience in a similar kind of job | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Physical appearance                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Q4. To what extent was your choice of career dependent on success in your studies?

- (1) Not at all   
 (2) Somewhat   
 (3) very much

**Q5.** As far as you know, how is it that your friends who graduate from the university find it so easy to get the kind of jobs they like? (For each of the reasons stated below, indicate its degree of importance).

|   | Very important           | Important                | Not important            |
|---|--------------------------|--------------------------|--------------------------|
| Because they have the training and qualifications appropriate for the jobs. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Because some of them have family ties with the employers                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Because they are of the same ethnic originals the employers                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Because they have adequate information on how to get a job                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Q6.** Please check the status of your previous work experiences since graduation inclusive of your current job in the appropriate columns: Indicate the status by using the following symbols where appropriate:

- T = temporary
- P = permanent (even if you are on probation/contract but likely to be confirmed)
- F = full-time (working more than 40 hours per week)
- PT = part-time (working less than 40 hours per week)

| Position or official     | Date    |         | Name of the establishment | Status<br>T, P, F, PT |
|--------------------------|---------|---------|---------------------------|-----------------------|
|                          | start   | end     |                           |                       |
| _____                    | _____   | _____   | _____                     | _____                 |
| e.g. Production Engineer | Jan '90 | Dec '90 | Motorola, PJ              | F,T                   |
| i. _____                 | _____   | _____   | _____                     | _____                 |
| ii. _____                | _____   | _____   | _____                     | _____                 |
| iii. _____               | _____   | _____   | _____                     | _____                 |

**Q7.** Is the current firm/organisation you are now working: (please circle one) is an entity of in the

- i) federal government
- ii) state government
- iii) local government
- iv) government-controlled corporation
- v) private corporation
- vi) private partnership
- vii) private single proprietorship
- viii) own self business
- ix) non-profit organization
- x) other: please specify \_\_\_\_\_

Q8. Is the firm/organisation you are working now is a joint venture with a foreign company?  
Please circle one. YES/NO

If YES state the country of the foreign partner. Country \_\_\_\_\_

Q9. What is the approximate number of employee in your firm/organisation?  
\_\_\_\_\_ employees.

Q10: What is the race of : (please circle one)

Majority of managerial staff : Bumiputera / Non-Bumiputera  
Majority of worker : Bumiputera / Non-Bumiputera

Q11. Indicate below the category most closely describing your

a) Current occupation. (Please check one).

- \_\_\_\_\_ Professional, technical and related workers
- \_\_\_\_\_ Managers and Administrators, except farm
- \_\_\_\_\_ Sales workers
- \_\_\_\_\_ Craftsmen or craftswomen and related workers
- \_\_\_\_\_ Machine operators
- \_\_\_\_\_ Transportation equipment operators
- \_\_\_\_\_ Labourers except farm
- \_\_\_\_\_ Farmers
- \_\_\_\_\_ Farm managers
- \_\_\_\_\_ Service workers, excluding private household
- \_\_\_\_\_ Private household workers
- \_\_\_\_\_ Others, please specify \_\_\_\_\_

Please name the exact title of your present occupation  
-----

b) Industrial classification/economic sector. (Please cheek one).

- \_\_\_\_\_ Agriculture, forestry, hunting and fishing
- \_\_\_\_\_ Mining and quarrying
- \_\_\_\_\_ Manufacturing
- \_\_\_\_\_ Construction
- \_\_\_\_\_ Electricity, water, gas or sanitary service
- \_\_\_\_\_ Commerce (wholesale and retail, banking, insurance and real estate)
- \_\_\_\_\_ transport, storage and communication
- \_\_\_\_\_ Service (civil administration and defense, education, health/medicine, recreation and entertainment and other services)
- \_\_\_\_\_ Others (specify) -----

Q12. How long are your regular total working hours (excluding overtime) per week  
-----

Q13. What is your present average annual salary before tax deduction? (Try to be as accurate as possible and we want to reiterate that all your answers are strictly confidential).  
M\$ \_\_\_\_\_ a year. :



**PLEASE do not answer question 11 to 13 if you are not holding a full-time job.**

- Q11. Does the status of your current full-time job commensurate or equitable with your qualification? Please circle one.**
- a) Is not commensurate
  - b) Is partly commensurate
  - c) Commensurate
- Q12. Does your current full-time job require levels of skills and training that you acquired in college? Please circle one.**
- a) Requires no skills and training acquired at college
  - b) Requires a low level of skills and training than acquired in college
  - c) Requires an equivalent level of skills and training acquired in college
  - d) Requires a higher level of skills and training than that acquired in college
  - e)
- Q13. Is your current full-time job related to your field or study? Please circle one.**
- a) Not related
  - b) Somewhat related
  - c) Highly related
- Q14. Are you employed in your major field of your study? \_\_\_\_\_ YES \_\_\_\_\_ NO. If NO, please indicate the main reason. (Circle one).**
- a) Never planned to work in major field
  - b) Could not find an appropriate job in my major field
  - c) Developed a new career interest
  - d) Could not find a job without relocating
  - e) Better pay
  - f) Better opportunity for advancement
  - g) My field is difficult to relate to a specific job
  - h) To see if I like this job
  - i) I have not passed the licensing or professional exam required for my major field.
  - j) Other (Please specify) \_\_\_\_\_

## **B2 - JOB SATISFACTION**

**Please do not answer this section if you are not holding a full-time job . This section refers to items describing how much you are satisfied with your current job.**

- Q1. Please indicate the extent to which you agree or disagree with each statements.**

**If you Firmly Disagree with the statement, circle FD**  
**If you Disagree with the statement, circle D**  
**If you Slightly Disagree with the statement, circle SD**  
**If you Slightly Agree with the statement, circle SA**  
**If you Agree with the statement, circle A**  
**If you Firmly Agree with the statement, circle FA**



Read each statement and circle your response as shown in the example.

strongly  
Disagree      Strongly  
Agree

e.g. I am satisfied with my current job.

FD   D   SD   SA   A   FA

By circling SD, the respondent slightly disagree with the statement that he is satisfied with the current job.

Please complete the following by circling one scale that best describes the satisfaction with different aspects of your current job.

| ITEM | QUESTION   | CIRCLE YOUR ANSWER |   |    |    |   |    |
|------|--|--------------------|---|----|----|---|----|
| a    | I am satisfied with my career progress to date                     | FD                 | D | SD | SA | A | FA |
| b    | My job fits my long range goals                                    | FD                 | D | SD | SA | A |    |
| c    | I would like to remain with my employer                            | FD                 | D | SD | SA | A | FA |
| d    | I am satisfied with the status of my position                      | FD                 | D | SD | SA | A | FA |
| e    | I am satisfied with the variety of activities of the job.          | FD                 | D | SD | SA | A | FA |
| f    | I am satisfied with the challenge of the job                       | FD                 | D | SD | SA | A | FA |
| g    | My job responsibilities are too broad for one person to accomplish | FD                 | D | SD | SA | A | FA |
| h    | I am satisfied with opportunity for creativity of the job          | FD                 | D | SD | SA | A | FA |
| i    | My skills are fully utilised                                       | FD                 | D | SD | SA | A | FA |
| j    | I am satisfied with the pay and benefits of the job                | FD                 | D | SD | SA | A | FA |
| k    | I need more resources to do my job                                 | FD                 | D | SD | SA | A | FA |
| l    | I am satisfied with the supervision                                | FD                 | D | SD | SA | A | FA |
| m    | I am satisfied with my fellow co-workers                           | FD                 | D | SD | SA | A | FA |
| n    | My job is not in agreement with my moral and spiritual values      | FD                 | D | SD | SA | A | FA |

If you have completed Sections A and B, you have finished the survey. Please return the completed book to us in the self-address stamped envelope provided.

**NOTE:** On the last page of this questionnaires there are spaces for written remarks. If you wish to comment on your background, educational (academic and non-academic) and job experiences and their relationships, please do so. We will be glad to have your opinions.

**SECTION C**

**CONTINUING FORMAL EDUCATION**

Please complete this section **ONLY** if you marked item in **SECTION A1** on **CURRENT INFORMATION** that your primary current activity is continuation of your formal education.

Q1. Indicate the degree your are currently seeking. Please check / one.

\_\_\_\_\_ Masters \_\_\_\_\_ Doctorate \_\_\_\_\_ Professional degree  
\_\_\_\_\_ Others (please specify) \_\_\_\_\_

Q2. Is your present program of study in the same discipline area as your bachelor's degree?  
Please check one.

\_\_\_\_\_ YES \_\_\_\_\_ NO \_\_\_\_\_ Closely related

Q3. Name of institution you are now enrolled and the location.

University \_\_\_\_\_ Country \_\_\_\_\_

Q4. Describe how well your undergraduate education prepared you for graduate/professional school. Please check / one.

\_\_\_\_\_ Well prepared; understand and can perform all that is expected of me  
\_\_\_\_\_ Adequately prepared  
\_\_\_\_\_ Not adequately prepared for advanced study  
\_\_\_\_\_ Not sure  
\_\_\_\_\_ Does not apply to me - not in graduate or professional school

Q5. When you completed your graduate or professional programme, where do you anticipate working? Please check / one.

\_\_\_\_\_ Agriculture  
\_\_\_\_\_ College or university  
\_\_\_\_\_ Elementary or secondary school  
\_\_\_\_\_ Business  
\_\_\_\_\_ Government  
\_\_\_\_\_ Non-profit organization (other than school or government)  
\_\_\_\_\_ Don't know  
\_\_\_\_\_ Others (Please specify) \_\_\_\_\_

Q6. When you go to work after you have completed your current program or programs, which activity do you anticipate will be your primary activity? Please check / one.

\_\_\_\_\_ Teaching \_\_\_\_\_ Research \_\_\_\_\_ Administration/Management  
\_\_\_\_\_ Sales \_\_\_\_\_ Information services \_\_\_\_\_ Technical services  
\_\_\_\_\_ Don't know \_\_\_\_\_ Others (Please specify) \_\_\_\_\_

Q7. Are you financing your current educational programme yourself?  
\_\_\_\_\_ YES \_\_\_\_\_ NO

If NO, which organisation is sponsoring your current educational program?

---

**THANK YOU FOR COMPLETING SECTION C**

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If you have completed Sections A and C, you have finished the survey. Please return the completed booklet to us in the self-address stamped envelope provided.

**NOTE:** On the last page of this questionnaire there are spaces for written remarks. If you wish to comment on your background, educational (academic or non academic), job experience, and your current pursuit for further formal education and their relationships, please do so. We will be glad to have your opinions and suggestions.

**SECTION D**

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Please complete this section **ONLY** if you marked item in question 1 **SECTION A1** on **CURRENT INFORMATION** that you are a full-time homemaker or unemployed.

**DIRECTIONS:**

Answer questions 1 - 3 if your primary current activity is **HOMEMAKER**

Answer questions 4 - 6 if your primary current activity is **UNEMPLOYED AND ACTIVELY SEEKING WORK.**

Answer questions 7 - 9 if your primary current activity is **UNEMPLOYED AND NOT SEEKING WORK BUT PLAN TO WITHIN 6 MONTHS.**

Answer questions 10 - 12 if your primary current activity is **UNEMPLOYED AND DO NOT PLAN TO SEEK EMPLOYMENT.**

**HOMEMAKERS** - Please check / the following

Q1. Since the date of your graduation, have you worked (full-time or part-time) outside the home?

Work full-time \_\_\_\_\_ Work part-time \_\_\_\_\_ Not working \_\_\_\_\_  
If YES, for how long? \_\_\_\_\_  
and what is the nature of the job? \_\_\_\_\_



Q2. How long have you been a homemaker?

- \_\_\_\_\_ Less than one month
- \_\_\_\_\_ 2 - 4 months
- \_\_\_\_\_ 5 - 7 months
- \_\_\_\_\_ 7 months or more

Q3. Which of the following do you expect to pursue in the next five years? (Check all that apply).

- \_\_\_\_\_ Continuing full-time home making and/or child rearing
- \_\_\_\_\_ Seek full-time or part-time work
- \_\_\_\_\_ Engage in further formal education
- \_\_\_\_\_ Individual pursuits (e.g. writing, painting, etc)
- \_\_\_\_\_ Others (please specify) \_\_\_\_\_

**HOMEMAKERS** - you have completed our questionnaires; skip to the end of Section D.

#### **UNEMPLOYED/SEEKING WORK**

Q4. Since the date of graduation, have you worked? (either full-time or part-time) ?

Work full-time \_\_\_\_\_ Work part-time \_\_\_\_\_ Not working \_\_\_\_\_

If YES, for how long? \_\_\_\_\_

and what is the nature of the job? \_\_\_\_\_

Q5. How long have you been without job? How long have you been looking for work?

**Unemployed**

- \_\_\_\_\_ Less than one month
- \_\_\_\_\_ 2 - 4 months
- \_\_\_\_\_ 5 - 7 months
- \_\_\_\_\_ 7 months or more

**Looking for work**

- \_\_\_\_\_ Less than one month
- \_\_\_\_\_ 2 - 4 months
- \_\_\_\_\_ 5 7 months
- \_\_\_\_\_ 7 months or more

Q6. What has been the problems you've encountered while looking for work? Rank the three most serious problems listed below as 1, 2, 3.

- \_\_\_\_\_ Lack of mobility; e.g. cannot move because of spouse's job
- \_\_\_\_\_ Cannot find a job with desirable characteristics (location, salary, etc)
- \_\_\_\_\_ Lack of job in my field
- \_\_\_\_\_ Lack of experience for job(s) sought
- \_\_\_\_\_ Lack of skills and education for the job(s) sought
- \_\_\_\_\_ Lack of information about where and how to look for a job
- \_\_\_\_\_ Lack of confidence in what I can do and what to do



- Over qualified, my education and skills exceeded those required for the available jobs.
- Did not pass licensing or professional exam in my field
- Physical handicap
- Racial discrimination
- Sex discrimination ( I am a male or a female)
- My appearance affected acceptance into a job (e.g. wearing tudung)  
(please specify) \_\_\_\_\_
- Failed very badly in job interview
- Low academic qualification
- Graduated from non prestigious university
- Poor ability to communicate in English
- Could not find a suitable firm or institution that suit my personal or religious belief
- Others (please specify) \_\_\_\_\_

**UNEMPLOYED WORKERS** - you have completed our questionnaires, skip to the end of SECTION D.

**UNEMPLOYED/NOT SEEKING WORK BUT PLANNED TO**

Q7. Since the date of graduation, have you worked? (either full-time or part-time?)

Work full-time \_\_\_\_\_ Work part-time \_\_\_\_\_ Not working \_\_\_\_\_  
If YES, for how long? \_\_\_\_\_

and what is the nature of your job? \_\_\_\_\_

Q8. How long have you been without a job?

- Less than one month
- 2 - 4 months
- 5 - 7 months
- 7 months or more

Q9. Indicate reasons you are not Currently seeking work. Please check one.

- Health problems
- Wanted a break; do not want to work this time
- Planning to continue education
- Discouraged from past experience - do not expect to find a job
- Travel
- Lack of mobility, e.g. cannot move because of spouse's job
- Physical handicap
- Did not pass licensing or professional exam in my field
- Others (Please specify) \_\_\_\_\_

**UNEMPLOYED WORKERS PLANNING TO SEEK WORK** - You have completed our questionnaires, skip to the end of SECTION D.

**UNEMPLOYED, NOT SEEKING WORK**

Q10. Since the date of graduation, have you worked? (either full-time or part-time?)

Work full-time \_\_\_\_\_ Work part-time \_\_\_\_\_ Not working \_\_\_\_\_

If YES, for how long? \_\_\_\_\_

and what is the nature of your job? \_\_\_\_\_

Q11. How long have you been without a job? Please circle one.

- \_\_\_\_\_ Less than one month
- \_\_\_\_\_ 2 - 4 months
- \_\_\_\_\_ 5 - 7 months
- \_\_\_\_\_ 7 months or more

Q12. Indicate the reason you do not plan to seek employment. Please check one.

- \_\_\_\_\_ Health problems
- \_\_\_\_\_ Wanted a break - do not want to work at this time
- \_\_\_\_\_ Lack of mobility - e.g. cannot move because of spouse's job
- \_\_\_\_\_ Planning to continue education
- \_\_\_\_\_ Discourage from past experience - do not expect to find a job
- \_\_\_\_\_ Travel
- \_\_\_\_\_ Lack of job in my field
- \_\_\_\_\_ Physical handicap
- \_\_\_\_\_ Low academic qualification
- \_\_\_\_\_ Others (please specify) \_\_\_\_\_

**THANK YOU FOR COMPLETING SECTION D**

If you have completed SECTIONS A and D, you have finished the survey. You may add extra remarks in the last page of the questionnaires. Please return the completed booklet to us in the self-address stamped envelope provided.

Code Number:

### **EXTRA REMARKS**

**Please feel free to add extra information that you think may help us to relate your background and your educational experiences (academic or non-academic) to your current occupation or major activities.**

**(Anda juga boleh menjawab di dalam Bahasa Malaysia sekiranya perlu).  
Terima kasih.**

## **APPENDIX C**

### **Distribution of Malaysian Students Abroad**



## APPENDIX C

### Distribution of Malaysian Students Abroad - 1992

| Country     | Number of Students |
|-------------|--------------------|
| USA         | 14,000             |
| UK          | 11,955             |
| Australia   | 10,900             |
| India       | 4,500              |
| Singapore   | 3,564              |
| Taiwan      | 3,244              |
| Egypt       | 2,403              |
| Japan       | 2,205              |
| Indonesia   | 2,000              |
| New Zealand | 1,000              |
| Germany     | 19                 |
|             | -----              |
| Total       | 55,790             |
|             | -----              |

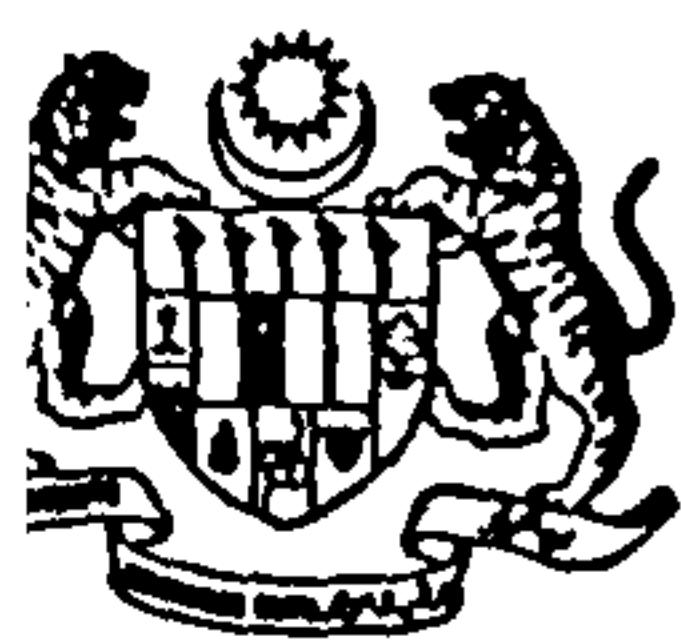
Source: Utusan Malaysia, August 31, 1993.

Note: There is a sizeable number of Malaysian students in France and a small number in Middle Eastern countries like Jordan, Saudi Arabia etc.

## APPENDIX D

### Letters:

1. A letter from the Director of Training and Human Resource of Public Service Department of Malaysia to respondents stating how important it is and the support for this research and requesting their assistants.
2. A letter from the author requesting the respondents to cooperate and respond to the survey.



JABATAN PERKHIDMATAN AWAM, MALAYSIA,  
Public Service Department, Malaysia,  
BAHAGIAN LATIHAN DAN KEMAJUAN KERJAYA,  
Training and Career Development Division,  
TINGKAT 9-11, 18-19, BANGUNAN PERKIM,  
Floor 9-11, 18-19, PERKIM Building,  
JALAN IPOH,  
Ipoh Road,  
50510 KUALA LUMPUR

Telefon: 03-4424455  
Telephone:  
Kawat: "FESTOFF KUALA LUMPUR"  
Cable:  
Telex: MA 31581  
Answerback FESTOFF MA 31581  
No. Fax: 4412966  
: 4411460  
Fax No.:

Ruj. Tuan:  
Your Ref:

Ruj. Kami:  
Our Ref: JPA (L) 3124915/ ( )

Tarikh:  
Date: 24 Oktober 1992

Saudara/i,

Assalamualaikum/Salam Sejahtera,

Pihak Jabatan Perkhidmatan Awam, Bahagian Latihan & Kemajuan Kerjaya membantu dan mengalu-alukan penyelidikan Tuan Haji Razmi Chik yang bertajuk "Employment Outcomes of Recent Graduates of Tertiary Institutions".

2. Kami percaya hasil kajian beliau dapat membantu kami melancarkan polisi-polisi penajaan yang lebih berkesan untuk menentukan perancangan tenaga manusia yang lebih tepat pada masa hadapan.

3. Saya berharap Saudara/i dapat memberikan sepenuh kerjasama dan membantu beliau mengisikan buku soal selidikanya. Insyallah bantuan Saudara/i bukan sahaja dapat membantu pengajian beliau dan pihak JPA, tetapi juga mungkin boleh dimanfaatkan oleh adik atau anak buah Saudara/i apabila mereka ditaja untuk mengikuti kursus yang paling sesuai pada masa hadapan.

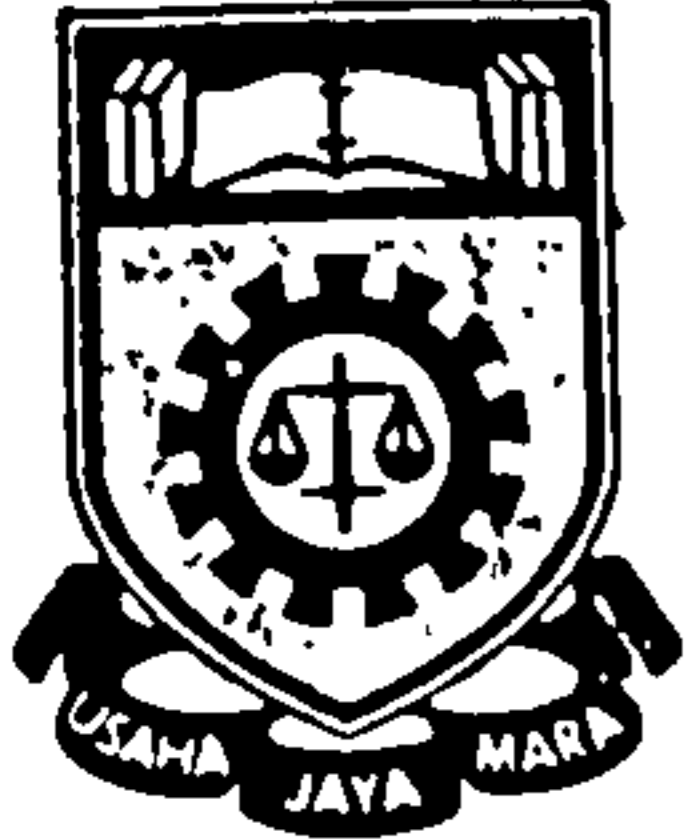
Sekian. Terima kasih.

Yang benar,

  
MAHAMAD ZABRI MIN

Pengarah

Bahagian Latihan & Kemajuan Kerjaya,  
Jabatan Perkhidmatan Awam,  
Malaysia.



# INSTITUT TEKNOLOGI MARA

PUSAT PENDIDIKAN PERSEDIAAN

Tarikh: 1 November, 1992

Seksyen 17, 40200 Shah Alam, Selangor Darul Ehsan Malaysia

Surat Tuan:

Tel: 03-5411166 & 03-5411188 Fax: 5411335

Surat Kami:

Saudara/i,

Assalamualaikum

Saya ingin mengambil kesempatan untuk mengucapkan setinggi-tinggi Tahniah diatas kejayaan anda dibidang akademik tempuh hari dan Selamat Maju Jaya dalam bidang yang anda jalankan sekarang.

Dikembarkan bersama ialah sebuah soal selidik mengenai kerja-kerja penyelidikan saya yang bertajuk "Employment Outcomes of Recent Graduates of Tertiary Institutions". Penyelidikan ini ialah untuk memenuhi sebahagian daripada keperluan mendapatkan Ijazah Kedoktoran dari University of Stirling, Scotland.

Saya berharap sangat anda dapat meluangkan sedikit masa menjawab soal selidik ini dengan setepat-tepatnya dan menghantarkan kepada saya, kalau boleh sebelum 14hb. November, 1992, dengan menggunakan sampul bersetem yang dikembarkan.

Saya ingin memberi jaminan yang segala maklumat yang anda berikan didalam soal selidik ini adalah rahsia, dan hanya saya seorang sahaja yang mengetahuinya. Diakhir buku soal selidik ini ada dicatitkan nombor rujukan, bukan bertujuan untuk mengenal pasti siapa yang menjawabnya tetapi untuk membolehkan saya membuat susulan kepada mereka-mereka yang belum menjawab soal selidik ini.

Pertolongan anda menjawab soal selidik ini bukan sahaja dapat membantu pengajian saya, tetapi diharapkan hasil kajian saya ini dapat membantu pihak kerajaan dan institusi pengajian tinggi merancang polisi penajaan dan program akademik yang lebih berkesan demi kepentingan perancangan tenaga manusia yang lebih tepat dimasa hadapan.

Hanya Allah sahajalah yang dapat membalas pertolongan dan budi baik anda. terima kasih.

Yang benar,

RAZMI CHIK

Pensyarah Kanan

Pusat Pendidikan persediaan ITM



**APPENDIX E**

**List of Residential Secondary Schools in Malaysia**

**BILANGAN SEKOLAH BERASRAMA PENUH SELURUH NEGARA.**  
(List of Residential Secondary Schools in Malaysia - 1993)

| NEGERI (1)   | JUMLAH (2) | NAMA SEKOLAH (3)   |
|--|------------|--|
| Perlis   | 1          | Sekolah Men. Syed Putra  |
| Kedah  | 3          | Sekolah Men. Sultan Abdul Halim<br>Kolej Matrikulasi UUM<br>Sekolah Men. Sultan Mahamad Jiwa   |
| Pulau Pinang   | 1          | Sekolah Men. Tun Syed Shah<br>Shahabudin   |
| Perak  | 4          | Sekolah Men. Tun Raja Azlan Shah<br>Sekolah Tuanku Abdul Rahman<br>Kolej Melayu Kuala Kangsar<br>Sekolah Men. Sains                      |
| Selangor   | 5          | Sekolah Alam Shah<br>Sekolah Sri Puteri<br>Kolej Islam Kelang<br>Sekolah Men. Agama Persekutuan<br>Kajang<br>Sekolah Men. Sains Selangor |
| Negeri Sembilan  | 5          | Sekolah Men. Agama Persekutuan<br>Kolej Tunku Kurshiah<br>Sekolah Dato Abdul Razak<br>Pusat matrikulasi (UKM)<br>Sekolah Tuanku Jaafar   |
| Melaka   | 1          | Sekolah Muzafar Shah   |
| Johor  | 3          | Sekolah Men. Sains Muar<br>Sekolah Men. Sains Johor<br>Sekolah Tun Fatimah   |
| Pahang   | 3          | Sekolah Sultan Hj. Ahmad Shah<br>Kuantan<br>Sekolah Sultan Hj. Ahmad Shah Pekan<br>Sekolah Men. Sains Tengku Abdullah                    |
| Terengganu   | 2          | Sekolah Sultan Mahmud<br>Sekolah Men. Sains Dungun   |
| Kelantan   | 2          | Sekolah Men. Tengku Mohamad Faris<br>Petra<br>Sekolah Men. Sains Machang   |
| Sabah  | 3          | Sekolah Berasrama Penuh Lahad Datu<br>Sekolah Berasrama Penuh Kota<br>Kinabalu<br>Sekolah Berasrama Penuh Labuan                         |
| Sarawak  | 1          | Sekolah Menengah Sains Miri  |
| SEMUA SEKOLAH DI BAWAH PENTADBIRAN KEMENTARIAN PENDIDIKAN. JUMLAH KESELURUHAN PELAJAR IALAH 22,000 ORANG, PURATA 700 SETIAP SEKOLAH. (4) |            |  |

(1) State (2) Number (3) Names of School

(4) All the schools are under the jurisdiction of the Ministry of Education with a total student population of 22,000 at an average of 700 per school.

Note: The above list does not include 20 residential schools under the jurisdiction of MARA (Council of Trustee of Bumiputra) which has a total population of 9000 students:

Source: Utusan Malaysia Jan 1, 1993