Chapter 2

2.1 Literature Review

Education produces knowledge, skills, values, and attitudes. It is essential for sustained economic growth and poverty reduction. Increase demand of post-secondary education or higher education contributes to the proliferation of graduate supply. The initial steps in the analysis of the decision to demand education were developed by Becker (1964)\(^3\) in human capital theory which was introduced by Schultz (1960)\(^4\). In this theory, a student is considered to be an investor, investing time and tuition costs. The income received as a result of this education is the benefit the student strives to maximize in order to maximize his well being. Freeman (1987) summarized the statistical studies showing the impact of income in occupations that require a university education on the students' demand for training for the corresponding careers.\(^5\)

The government policy towards higher education has been framed within the context of supplying employers with a highly skilled and suitable workforce in order to achieve the New Economy Policy as well as to help enterprises to face the growing rigours of global competition. Since the 1990s, there is a drastic shift in educational policy that emphasizes human resources development to facilitate Malaysia's goal of becoming a developed nation by the year 2020. The duration of degree courses that had been

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ed from 4 to 3 years (except for medical degree) to overcome the acute shortage of manpower in the labor market. As a result, the supply of graduates increased. On the other hand, it has been forecasted that the country required more than 150,000 professionals and technicians by the year 2001 (Molly N. N. Lee, 1999).

According to Professor Chris Duke, higher education serves as an important means for young people joining adult society sort themselves out and are sorted out to meet manpower demand. It provides a screening and selection function of labor market. However, technological change and economical instability led to the imbalance in the supply and demand of graduates.

Institutions produce a technological sophisticated workforce that capable of keeping up with the latest round of information developments and ensuring the country’s growth. According to human capital theory, there is a close relation between economic growth and human capital. Higher education produces graduates with various professional skills to meet the augmenting market demand as a result of the country’s growth whereby more job opportunities are created. Thus, the government has established the establishment of private higher institution. However, the expansion of higher education has brought about unfavorable consequences. For example, declining in the education quality, it also resulted in the mismatch between demand and supply of labor (Salmi, 1991).

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Lee (1999), “Private Higher Education in Malaysia”, School of Educational Studies, USM Published. Pg. 64. 
According to Michael P. Todaro⁹, education involves social costs of education and private costs of education. Social costs of education refer to the opportunity cost to society as a whole resulting from the need to finance heavily as educational expansion at higher levels. This is because these limited funds might be more productively used in other sectors of the economy. Social costs of education increase rapidly as students climb the educational ladder. Private costs of education are the cost borne by students themselves that increase more slowly or may even decline.

The widening gap between social and private costs provides an even greater stimulus to the demand for higher education that it does for education at lower levels. Educational demand therefore becomes increasingly exaggerated at the higher levels which causes the increase supply of graduates. Educational opportunities can be accommodated to these distorted demands only at full social costs. The social costs of accommodation grows much more rapidly than the places provided as demands are generated progressively through the system. More and more resources may be misallocated to educational expansion in terms of social costs, and the potential for creating new jobs (demand for graduates) will consequently diminish for lack of public financial resources.

According to Viswanathan Selvaratnam¹⁰ Singapore higher education policy is more market-driven but state-controlled, three-tier higher education system to support its private sector-driven economic modernization strategy. Graduate output was met through a rolling of five-year manpower budget. Admission into the higher institutions is

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highly competitive. The size, quality and course offerings are based on labor market needs, rather than a supply driven higher education system. Higher education policy response promptly to external changes. Higher institution established strong connection between education, the labor market and economic development.

According to Gareth Williams\textsuperscript{11}, public universities' graduates in Japan, are eagerly sought after by industrial and commercial companies as access to them is strictly limited by competitive examination. There are well trained, equipped with skills and more competent. In another words, graduates' quality is importance to meet the labor market demand.

According to Thomas Owen Elsemon & Lauritz Holm-Nielsen\textsuperscript{12} although higher education systems are in a constant state of change, they are difficult for governments to reform. They analyze a wide variety of country experiences in establishing mechanisms to co-ordinate the development of higher education systems, diversifying institutional financing and increasing the efficiency of public investments. Attention is drawn to the need for effective policy structures to manage higher education, to link costs of reforms to benefits such as increased opportunity, to take account of the institutional constraints to change as well as to carefully articulate educational reforms with other public policies that influences the performance of the higher education systems.

\textsuperscript{11} Gareth Williams (1997), "Principals, Agents, Producers and Consumers in Higher Education", by The Bath Press.
\textsuperscript{12} Thomas Owen Elsemon & Lauritz Holm-Nielsen REFORMING HIGHER EDUCATION SYSTEMS: SOME LESSONS TO GUIDE POLICY IMPLEMENTATION. World Bank (1995)
In Malaysia, the discrepancies between demand and supply of graduates in some fields are expected especially in IT and technical field as the government immovably pushes the MSC growth. FDI creates new job opportunities and the demand for graduates increase.

On the other hand, increase number of higher institution increase the graduates supply to the labor market. However, graduates' demand is difficult to project accurately but supply requires medium-term planning. Thus, mismatch problem arises.

According to U. Teichler\(^1\) higher education must reform in response to the changing challenges from the world of work. Higher institutions today should devote greater attention to generic competencies, social skills and personality development, prepare students for the growing globalization and internationalization as well as for indeterminate future job tasks, new employment patterns and contributions to innovation in society.

According to Nowotny\(^2\), teaching and learning in higher education should be geared to immediate market need and provide graduates to fill the demand. Higher education has the task of preparing students to be able to call in question the prevailing rules and tools in employment, to take on indeterminate job tasks and to be agents of innovation. Thus, it has to translate the expectation raise from outside, and must define its own proactive role with regard to the job tasks and employment patterns of graduates.


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2.2 Background of Higher Education System and Policy

Due to the drastic social, economic, cultural and technical changes that are taking place in our modern world, the role, the nature and the organization of higher education have become the focus of critical analysis and discussion since the early 1980s. Education is an investment in human skills. Like all investments, it involves both a cost and a return. The returns include better employment opportunities, jobs that are less sensitive to general economic conditions, better opportunities to participate in employer providing training and higher earning, greater interest and participation in civic affairs such as rate of volunteerism or voting, or greater knowledge of health behavior. The cost of education involves tuition, books, fees and the earning given by not working time, as well as dilution of government revenue to support or subsidize the education expenditure.

Higher education systems are in a state of constant change nearly everywhere. Higher institutions are being established with new missions and innovative configurations of training. It also aimed to serve populations that previously had little access to higher education. Nevertheless, despite the dynamic characteristics of higher education systems, they are notoriously difficult for governments to reform.

The state influence on the different institutional components of higher education systems varies enormously. At one extreme level are enormous technical and teacher training institutions that are subject to the government policies affecting student selection, examination and the employment of their graduates. These are powerful instruments for...


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change. In the case of teacher training institutions, the recruitment of most graduates into state institutions ensure that they are especially responsive to the government policies. In some countries, higher education institutions are fully financed by the state and most graduates are absorbed into the public service. This doesn’t mean that the higher education institutions can be easily manipulated by the government policies.

Many explanations can be advanced for this. Universities have traditions of autonomy and academic freedom that were established through prolonged conflict with religious authorities and, since the mid-19th century, with the modern national state. Academic communities almost universally asserted the right to control those instructional and research activities, which are essential for the future preparation of academic profession members. In addition, the university administration is generally under the control of their teaching staff, although the most senior levels of administration may be appointed by government. In both respects, universities and colleges are unlike other kinds of higher education institutions. For example, teacher training colleges are often staffed and administered by cadres of the civil service and their programs stipulated by ministries of education while university faculties of education usually enjoy greater autonomy in such matters.

Notwithstanding policies the governments may adopt to isolate universities from the political system or to place them under state supervision, they are often important arenas of political activity. Public universities required large investments, substantial infrastructure, procure inputs from local sources, employed large numbers of academic, administrative and support staff, purchase many inputs from local sources and, thus,
generate important economic "spin-offs". Decisions to establish locate and/or to expand public institutions have high political impact and prompt close political attention as do institutional procurement and staffing practices. Not surprisingly, this often leads to overt political interference into the affairs of the universities despite whatever legal protection they may enjoy.

In addition, universities in many countries, particularly their students, have a long tradition of political dissent and participation in the political process. Students represent an incipient political elite with claims to an influential, independent role in the political system that are often recognized, implicitly, in negotiations between student groups and ministers (and often heads of state) about campus grievances. In these situations, university students are not passive objects of reform but key political actors in the reform process.

Strategies for reforming the management and financing of higher education systems are essential. Higher education reform policy are undertaken in order to increase the cost-effectiveness of public investments, the responsiveness of institutions to changing labor market conditions and their contribution to national development, in general. The focus will be on experiences in developing countries as well as those in transition to a market economy. Attention is also drawn to the need for policy makers to carefully consider the incentives provided for higher education institutions to positively respond to government initiated reforms.
Higher education has been concerned primarily with issues of policy and management recently (Yee, 1995). There is a strong propensity to devote more and more attention to issues concerning the social relevance of higher education, including the links between higher education and the labor market. Preparation for work is one of the functions of higher education. The education functions of higher education when viewed in relationship to employment are in principle general, professional, or academic. Higher education aims to provide a general enhancement of knowledge for students, and possibly a cultivation of value, attitudes and development of the personality. It is expected to provide a foundation of knowledge for the occupation that the student is likely to enter and in some areas as a direct professional training.

Even if higher education was shaped strongly both quantitatively and qualitatively according to the needs of the employment system, imperfections in identifying future demands and corresponding education requirement would still remain. Moreover, flexibility on the part of graduates can make up for imperfections in planning and forecasting.

Malaysia as a developing nation, emphasizes on the human resources development, as the rapid quantitative expansion of education opportunities is the key to national development. Towards this end, education and training efforts are being taken and intensified, not only to equip individuals with the appropriate knowledge and skills but also to produce responsible citizens with strong moral and ethical values. In addition, such efforts will help to develop a technically competent labor force that will be

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essential for the attainment of vision 2020 in making Malaysia a fully developed nation by the year 2020. Besides this, it will enhance Malaysia competitiveness in this knowledge-based economy millenium. As a result, many of the public and private higher institutions were established recently. By the year 1998, there are 10 public universities, 7 private universities, 6 polytechnics, 33 teacher-training colleges, and 415 private colleges. Besides this, the Governments has set up four university colleges like the Tun Hussein Onn University College, Terengganu University College Malaysia Islamic University College and National Technical College. The Government planned to build public universities in Pahang, Perlis, Negri Sembilan and Melacca. All this higher education institutions offer tertiary and professional courses leading to degrees and professional degree or diploma.

Under the Malaysian Plan, the Government planned to develop its higher education as a regional excellent education center. Thus, private higher institution mushroomed and has been fuelled by strong social demand for education. Public and private higher institutions produce a great number of graduates every year. However, the mismatch between demand and supply causes graduates unemployment. This also indicates the fact that higher institutions do not know how to predict employers’ demands for a great range of changing skills, and employers do not know either. What is important to keep in mind is that only a part of the growth in higher institutions has been due to the autonomous growth in employers’ demand for graduates. As Seymour concluded “The disconnection is real between what the colleges and universities produce in terms of learning and outcomes in their graduates and what industry requires. And the longer we
refuse to address the gap, like budget deficit, the more drag it will be on the economy and global competitiveness.  

2.3 Definition of Education Policy and the Importance of Education

Education policies give both direction and substance to disseminating primary cultural values. It also has a tremendous bearing on the manner and extent to which the importance of individual initiative and competition are underscored, as well as the need for working cooperatively, caringly and effectively with others. Moreover, education determines whether or not an individual is given opportunities to acquire fundamental skills that enable them to make meaningful contribution to the human condition. Education plays a vital role in preparing individual for active participation in the political, economical and social lives of their communities. Individual especially graduates will feel greater responsibilities to perform, as they are well trained and more educated. The National Philosophy of Education (NPE) was documented in 1988 and read as follows: “Education in Malaysia is an on-going efforts towards further developing the potential of an individual in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious based on a firm belief in and devotion to God. Such an effort is designed to produce Malaysian citizens who are knowledgeable and competent, who posses high moral standards, and who are responsible and capable of achieving a high level of personal well-being as well as being able to contribute to the betterment of the society and nation at large.”

2.4 Definition of Education Planning

Every country has an education plan. In order to make the best use of scarce human and financial resources available education planning is emphasized. The education planning is a set of decisions for action in the future. Education planning is necessary to develop an education system that is capable of producing the educated and trained manpower required by a diversified economy as well as strengthening national unity and social cohesion. Gareth Williams identified that all planning in education consists of "Essentially of deciding in advance what you want to do and how you are going to do

Education planning is an instrument to channel all knowledge about education and disciplines into the preparation and implementation of education plans. It involves the willingness to size up the country's capacity to respond to challenges and to prescribe action to be taken. Education planning is aimed at eradicating illiteracy, effecting national integration, improving the utilization of human resources, facilitating technological advancement in agriculture and industry as well as producing social, economical and political leadership. In line with this, education planning stressed on the enhancement of social cohesion and national unity and the production of manpower for economic development activities.

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Education and manpower planning are closely linked in order to serve a planned economy as well as to serve the wealth of the market driven economy (Huffner, 1983). The pessimistic views spread that expansion of higher education had gone too far and that graduates skills no longer match the market demand. Experts predominantly observe that job prospects have been bleak for recent graduates in most regions. Therefore, the more or less continuous trend of enrolment growth in higher education promises no alleviation of the problem on the supply side.

2.5 A Comparative study of Higher Education Policy in Singapore

Between 1960 and 1992, Singapore put in place a market-driven but state-controlled, three-tier higher education system to support its private sector-driven economic modernization strategy. The programme has resulted in a diversified, flexible higher education system, which produces a highly qualified human resource base. The system is integral to the country's goals of raising productivity, economic growth and living standards. The three-tier system consists of:

(i) universities, which provide high-level skills training for both the public and private sectors;

(ii) polytechnics, which provide technical, management and service skills at the middle level; and

(iii) technical institutes, providing cutting-edge, professional and technical training programmes.

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In the 1960s and 1970s graduate output was met through a rolling five-year manpower budget. After 1979, the Council for Professional and Technical Education (CPTE), under the Ministry of Trade and Industry, become the body responsible for reviewing, planning and projecting the overall middle- and high-level work force requirements. The CPTE's projected skill needs are translated into policy measures, which guide the range of education, training and research programs at tertiary institutions.

2.5.1 Access and Enrollment

Admission into the tertiary institutions is highly competitive in order to avoid high drop-out rates--a waste of scarce resources--or the lowering of degree standards. The size, quality and course offerings are based on labor market needs, rather than a supply driven higher education system. Despite restricted admissions, the growth in student numbers has been dramatic. It increased from 8,171 in 1960 to 56,422 in 1990, a six-fold increase in three decades. Enrollments were stimulated by:

(i) the democratization of primary and secondary education with a high quality of output;
(ii) subsidies to higher education; and
(iii) rising family incomes.

Concurrently, top universities in the English speaking developed world have been used to train some of Singapore's most promising students, in order to expose them to the intellectual climate of industrialized countries, and to the increasing international competition facing the nation. In addition, students are sent abroad to be trained in
specialization that are not available locally. An increasing number of self-financed students are studying abroad, largely representing the unmet demand at home.

2.5.2 Research and University-Industry Links

The government's Economic Committee Report of 1986 exhorted the universities to accelerate their research and postgraduate training with the aim of fostering a more stimulating research environment, and to meet the growing demand for qualified research scientists and engineers. The recruitment of talented staff is pursued both locally and internationally and supported by:

(i) a stringent tenure policy;
(ii) rewards for good teaching and research performance;
(iii) favorable staff-student ratios;
(iv) well-equipped teaching and research facilities; and
(v) staff training opportunities to upgrade skills and performance.

Research and development are critical to Singapore's economy, and the government formulates its R&D policies according to the country's long-term economic development needs. R&D strategies concentrate on incremental technology, and focus on the attainment of realistic goals. Under the government's R&D policies, greater university-industry interaction through consultancy and joint R&D projects has been established. The National Technology Plan 1991 aims to achieve a total national expenditure in R&D of GDP 2 percent by 1995, with the private sector contributing a minimum of 50 percent. The ratio of scientists and engineers engaged in R&D will be raised to 40 per 1,000 labor force participants.
2.5.3 Resource Allocation

Singapore recognizes that long-term economic development is dependent on a critical mass of educated and skilled workforce. Consequently, education receives a large portion of the country's public expenditure. Up to 1990, tertiary institutions received an increasing proportion of the total education budget; its share rose from 13 percent in 1970, to 16 percent in 1980, and to 26 percent in 1990. Over this time period, the share allocated to primary education declined. Higher education expenditure increases were kept in line with increases in numbers of students. The government understands that high quality education costs money, and student subsidies are essential to improve equality of opportunity as well as to attract talent into higher education, particularly into economically critical fields of study.

With the recession of the mid-1980s, government subsidies to higher education have been reduced and a policy of greater cost-recovery through tuition fees has been instituted. The eventual objective is to lower the student subsidy to around 70 percent of tuition costs, to reduce the over-dependence of public tertiary institutions on government funding, and to introduce an activity-based funding mechanism. The aim is to subsidize tertiary institutions for up to 60 percent of their operating costs. The institutions would generate the balance (40 percent) from tuition fees, user charges and other non-governmental sources. The government would, however, continue to fund capital expenditures.

In response, tertiary institutions have adopted policies to diversify their revenue sources. Student tuition fees have increased gradually since 1986 and substantially from 1989. From 1992, tuition fees has increased between 5 to 7 percent annually to keep pace with
wage and other cost increases. In addition, institutions have established endowment funds to tap non-government sources. The two universities, with government support, have launched a $1 billion Universities Endowment Fund. The income generated from this fund is to be used exclusively to support special and innovative projects, as well as develop programs which will nurture intellectual development and research.

2.5.4 Student Loans

When tuition fees were increased in 1989, a Tuition Loan Scheme (TLS) was instituted to ensure that no deserving student was deprived of tertiary education. All full-time university undergraduates, irrespective of parental income, can borrow up to 65 percent of their tuition fees, while polytechnic students can borrow up to 50 percent of their tuition fees.

2.5.5 Lessons and Emerging Issues

Singapore’s success story has several "best practice" implications for higher education policy makers in Malaysia as well as for higher education experts working in donor agencies. The useful lessons are:

(i) to maintain a sustained and consistent policy over the long term;

(ii) to ensure strong linkages between education, the labor market and economic development;

(iii) to develop mechanisms to matriculate high quality students, including a merit-based admissions policy, and to recruit quality staff, accompanied by stringent tenure and reward systems;
(iv) to develop a prioritized, development-oriented research strategy backed by an excellent infrastructure, support facilities and incentive schemes with an aim to achieve excellence, and to develop management strategies to maintain cost-effectiveness in program offerings and research; and

(v) to implement a concerted policy effort to diversify resources and reduce government subsidies without jeopardizing quality. This policy is justifiable and feasible in areas with relatively high household incomes.

In spite of its success, Singapore's education system faces a number of emerging problems. The ability of a highly controlled and corrected system to respond independently and quickly to the growing education, training and research needs of a rapidly expanding, highly competitive and technologically-driven private sector is limited. The future affordability of higher education for lower income students will be difficult to maintain with sharp increases in tuition fees and costs of living. Female students in professional fields such as medicine, engineering and law are underrepresented. Finally, there is growing discontentment with the government's policy of streaming university students into critical fields, in order to ensure that these professions have high quality, talented high-level manpower. In doing so, however, talented students may be kept from pursuing their course of first choice.20

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